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ORIGINAL

GUAM LAND USE COMMISSION REGULAR MEETING MINUTES



Department of Land Management Conference Room ITC Building, Tamuning



Thursday, September 24, 2015 1:40 p.m. to 4:00 p.m.

GUAM LAND USE COMMISSION Regular Meeting Thursday, September 24, 2015

Department of Land Management Conference Room 3rd Floor ITC Building, Tamuning

MEMBERS PRESENT:

Mr. Lawrence Rivera, Chairman

Mr. John Arroyo, Vice Chairman

Ms. Beatrice "Tricee" Limtiaco, Commissioner

Ms. Conchita Bathan, Commissioner

Mr. Tae Oh, Commissioner

Mr. Michael Borja, Executive Secretary

Ms. Kristan Finney, Legal Counsel

Excused: Mr. Victor Cruz, Commissioner

PLANNING STAFF PRESENT:

Mr. Marvin Aguilar, Guam Chief Planner

Ms. Celine Cruz, Case Planner

Ms. Cristina Gutierrez, Recording Secretary

GUAM LAND USE COMMISSION GUAM SEASHORE PROTECTION COMMISSION Attendance Sheet

Department of Land Management Conference Room 590 S. Marine Corps Drive, Third Floor, ITC Building, Tamuning

	Date of Meeting: Time of Meeting:	Thurs., September 24, 2015	X GLUC GSPC X Regular Regular Special Special ✓ Quorum Quorum Non-Quorum Non-Quorum		
	COMMISSION MEMB	ERS	SIGNATURE		
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	Conchita D. Bathan, Co	ommissioner	C ELV		
	Beatrice P. Limtiaco, C	ommissioner			
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	Penmer Gulac, Planner IV				
	Celine Cruz, Planner IV				
	Jeffrey Baker, Planner II				
	M. Cristina Gutierrez, WPS	S II	Mighling		
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GUAM LAND USE COMMISSION GUAM SEASHORE PROTECTION COMMISSION

Speakers Sign-In Record

Location: Department of Land Management Conference Room 590 S. Marine Corps Drive, Third Floor, ITC Building, Tamuning

X GLUC	Regular Date: Thursday, Se	ptember 24, 2015
GSPC	Special Time: //#	40 pm
Quorum	No Quorum Adjournment:	4:00 00:4
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Print Name	Applicant or Representative	Telephone No.
Don Sadhurur		689-0414
Richard Sana	/\I	627-9869
Ander manguit	Quan +pp	\$00-479C
NONIE AMAR	PAC INDL PARK	888-0961
DONI R-TACUYAN	PAC LYOL PAME	727 - 1349

GLUC Form 20 - GLUC Speaker Log Record Form - APRIL 2010

GUAM LAND USE COMMISSION GUAM SEASHORE PROTECTION COMMISSION

Public Attendance Record

Location: Department of Land Management Conference Room 590 S. Marine Corps Drive, Third Floor, ITC Building, Tamuning

X	GLUC	X Regular	Date:	Thursday, September	er 24, 2015
	GSPC	Special	Time:	1:40 Jan	
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GUAM LAND USE COMMISSION REGULAR MEETING MINUTES

Department of Land Management Conference Room Thursday, September 24, 2015 • 1:40 p.m. to 4:00 p.m.

I. Notation of Attendance

Chairman Rivera called the regular meeting of the Guam Land Use Commission for Thursday, September 24, 2015 to order at 1:40 p.m., noting a quorum.

Present were: Chairman Lawrence Rivera, Vice Chairman John Arroyo, Commissioners Conchita Bathan, Tricee Limtiaco and Tae Oh, Executive Secretary Michael Borja, Legal Counsel Kristen Finney, Guam Chief Planner Marvin Aguilar, Case Planner Jeffrey Baker and Recording Secretary Cristina Gutierrez.

Absent: Commissioner Victor Cruz [Excused]

II. Approval of Minutes

<u>Chairman Rivera</u> we have the approval of our Minutes; this is our GLUC regular meeting of Thursday, September 10, 2015. Commissioners, have you had the chance to go through the Minutes?

<u>Commissioner Limtiaco</u> Mr. Chair, I move that we approve the Minutes of GLUC's meeting of September 10th, 2015 pending corrections to be sent to our Recording Secretary by end of business day today.

Commissioner Bathan second.

<u>Chairman Rivera</u> for approval by Commissioner Limtiaco, second by Commissioner Bathan; any discussion? [None noted] If not, all in favor of the motion for approval of our meeting of September 10, 2015 say "aye" [Chair Rivera, Vice Chair Arroyo, Commissioners Limtiaco, Bathan and Oh]; all oppose say "nay."

[Motion to approve was passed unanimously; 5 ayes, 0 nay]

III. Old/Unfinished Business

<u>Chairman Rivera</u> do we have any old or unfinished business? [Recording Secretary responded that there were none.]

We'll go ahead and move into our new business --

IV. New Business

Tentative Subdivision Plan

A. The Applicants, Deepak and Kiran Sadhwani (Owners) represented by FC Benavente, Planners; request for a tentative subdivision for the proposed development of an industrial park for warehousing and other permitted "M1" uses, on Lot 5315, in the Municipality of Dededo, in an "M1" (Light Industrial) zone, under Application No. 2015-26. Case Planner: Jeffrey Baker

<u>Marvin Aguilar (Chief Planner)</u> for the record sir this application is I did this application with our new planner Mr. Jeffrey here who is assigned to our Subdivision section; so, he did most of the leg work here.

Mr. Aguilar reads the staff report to include facts, purpose, no public hearing, staff analysis/discussion, conclusion, recommendation and conditions. Also read was the summary of position statements from the various ARC agencies. [For full content/context of the staff report/summary position statement report please refer to Attachment "A"]

For the record, Chief Planner reported to the Commission that he and Mr. Baker visited the project site yesterday and that the property had been subjected to some vegetation clearing.

[Attachment A – Staff Report dated September 15, 2015]

<u>Marvin Aguilar</u> we just recently received position statement from Guam Environment Protection Agency and prior to the preparation of this staff report we also received a report the Guam Waterworks Authority and I think a copy that has been issued to the Commissioners.

<u>Chairman Rivera</u> Commissioners, you've received copies from EPA and GWA. And also we have an overview of the property.

Okay, any question for staff?

<u>Commissioner Limtiaco</u> Mr. Chief Planner, in your report you had mentioned, this is just to clarify, your staff analysis for B in reference to the entrance through the FAA Road into the subdivision. You had mentioned that was Lot 5313-7 right not the lot we're looking at?

Marvin Aguilar no, no, it's an adjacent lot.

<u>Commissioner Limtiaco</u> in regards to Lot 5313-7 the current handout that you gave to us that lot is highlighted in black and there's a red-dotted circle within the lot. Is the ownership of this lot also the applicant ... does the applicant own this lot as well?

Marvin Aguilar yes ma'am ... for the record ---

Commissioner Limtiaco so this will be a right-of-way?

Marvin Aguilar portions of the lot will be a right-of-way.

<u>Commissioner Limitaco</u> okay. So we need a map that shows that portion of the lot that is a right-of-way.

Marvin Aguilar my understanding is that they're working on that.

<u>Commissioner Limtiaco</u> if we don't need it now we would need it for the final subdivision approval.

<u>Marvin Aguilar</u> egress/ingress is an element of any and I do have other egress/ingress opportunities. We just chose this because of the available and for the record, I am calling it FAA Road, I could be wrong. It's that one road that leads to the front of the now Core Tech workforce dormitory. And it's just because the way the property is positioned there's this alignment of the FAA Road; it's pretty difficult to try to make that work. So, we're trying to tweak that. When this map was submitted it was basically to show that it can be done.

Commissioner Limtiaco okay. Your recommendation 5C you had said ... it is your recommendation that the applicant also submit CCRs prior to the final subdivision (undecipherable due to excessive noise). In your recommendation you state that the CCRs are in place and you say it's going to be used strictly for light industrial use. My question for this is I understand that this is a tentative subdivision in an M1-zone, and in their application itself they don't ask for any other uses (mostly warehousing); but their supporting documents they reference workforce housing, barracks. And as far as special uses though what special uses in an M1-zone that are separate applications. Workforce housing requires a separate application?

Marvin Aguilar requires a conditional use permit.

<u>Commissioner Limtiaco</u> okay and then any variances, any height variance is a separate application.

Marvin Aguilar any height variances will yes, and there are some conditional use requirements as well but they lean towards the heavy industrial requirements, M2. Otherwise, anything with light industrial or commercial nature can be ... and the thing is that residential development can occur in an M1 as well; but the applicant in our past dialogue, discussions they were insistent. That was the recommendation that I made that if you don't have residential or you're clear that you don't have residential development in this subdivision then you need to do something more stronger which is CCRs. Noteworthy is the fact that we've talked to several homeowner association groups and they're trying to resolve problems through our department.

We've actually had to defer to their CCRs and say you need to resolve with your CCRs because it sorta kind of really actually does, trumps the Zoning Law because they're more restrictive.

<u>Commissioner Limtiaco</u> it's a good point, okay. And last, D – you're saying the plans for the final subdivision regarding runoff issue should be discussed with BSP and GEPA. We don't have to have that in place now, but when they come back for final this is an issue that we would like to see prior to us reviewing their application. I just want to be clear on that.

<u>Chairman Rivera</u> we'll get to you sir. We'll do staff first and then we'll get to the applicant as soon as we're finished. Any other questions for staff?

<u>Commissioner Bathan</u> Mr. Chief Planner, I have a question. Since the application before us is, the intention of the applicant is to subdivide the 37.8 acres of lot into 51 lots and eventually sell it or lease or whatever they want to do with that property. I could just imagine because they want to ... the intention was to do a warehouse type of activity right. So if we were to include in our approval a landscaping plan because if it's warehouse I don't know who would be responsible for the landscaping on the whole subdivision. Will it be imposed on each lot or it's going to be part of CCRs; how do we put that in a landscaping plan will be required.

Marvin Aguilar perhaps maybe the applicant can expand on the specifics regarding the CCRs that is an element that's normally part of these controls is having landscaping. Interestingly, BSP is suggesting landscaping through these rain gardens which is actually a new methodology for handling storm water runoff. I like to call them nice little holes in the ground with pretty flowers; if that's not landscaping I don't know what is. It's something that can be incorporated into some of the desired intents for the subdivision.

<u>Chairman Rivera</u> on the smaller lots Marv, the smaller lots will a normal warehouse building will fit in this accommodate that?

<u>Marvin Aguilar</u> there is no size limitation to what kind of warehouse you can put in there you just gotta meet the setback requirements. You can zero in the front which is facing the easement, you can go 8-feet on both sides and then you need 25-feet in the rear.

<u>Vice Chair Arroyo</u> on the CCRs have you spoken to the applicant about how to try and enforce those ... are they looking at some kind of association of owners?

<u>Marvin Aguilar</u> something to that effect sir. Whatever is going to effectuate the CCRs and then to maintain it.

<u>Commissioner Bathan</u> another question. Is there a minimum of lot size for a lot to be zoned M1?

Marvin Aguilar no, it's half-acre.

Commissioner Limtiaco for an M1 or any or just for M1?

Marvin Aguilar it's the general lot size requirement.

<u>Commissioner Limtiaco</u> I would have thought that the minimum lot size for a light, any industrial use would be larger than a standard lot size for any use.

Marvin Aguilar and the half acre actually follows EPA ---

<u>Chairman Rivera</u> any questions for staff? We can come back to them. Sir, please introduce yourself and your team and start your presentation.

<u>Richard Sana</u> (FC Benavente, Planners representing Mr. Don Sadhwani (owner) to my right. Also with me are Noni Amar, Engineer and Boni Tacuyan)

I want to go over the ... the staff report basically describe (sic) what this project is about. And just to answer Ms. Limitaco's inquiry about the size, the minimum lot size of the property to be zoned M1. You have to understand that the property actually 37 acres of a zoned M1 and are now being subdivided to smaller parcels to be sold to any individual owners who are of the interest of developing the property to do some light industrial activities or uses. And I think it's about time we have an industrial park that is organized and would have some kind of regulations and it would be maintained and enforced throughout the operation of this industrial park.

I would like to address some of the concerns of the agencies. And just for the record, we only received BSP's position statement. We have not received ... just today, for the first time we've seen Guam EPA's position statement and we didn't prepare a response for this because I didn't see it prior to this morning, but we will try and address those concerns.

First, the BSP position that the ponding basin and that it may not be adequately sized to accommodate the entire subdivision. And BSP suggests alternative methods to address surface water catchment per each lot prior to ... prevent percolation and natural waste materials into the northern water recharge area. And Planning Staff is also in agreement and we are in agreement with second part of that. I know that our engineer Noni has designed the ponding basin to capacity to absorb the runoff from ... the runoff that will be generated here was actually on the surface, impervious surfaces like paved asphalt roads; as you know we're addressing that now. When these lots are purchased and we expect the individual owners to provide their own method of storm water management; rain water from the roofs and I agree, I think with BSP that we will use a much more green eco-friendly type methods. I believe they're called low impact development BMPs. One of the consideration that should be considered by the individual owners is those rain garden types and those (undecipherable) with aggregates and sand for filtering before it actually gets discharged to the ponding basin and infiltrates into the ground water. I just wanna ... also one of the things that we need to understand is that a lot of the

storm water management is also based on the character and features of the location. Storm water management is challenge as you can see as evidence of the vast rain storms that we have where we have numerous floodings (sic) in different areas. And you have to understand also that managing southern storm water in southern Guam is different from managing it up north where we're under the water lens. The rate of percolation up north is a lot faster than in the southern location on Guam.

I have a report here that was done by ... it's a final EIS that was done by the for the Marine Corps relocation to Guam. Before these areas was known as the FAA location, the south Finegayan location and here's the report and this is what the report says to give you an idea of the features and character those properties in the north.

[Mr. Sana reads the lengthy report that talks about the features and characters of the northern villages; in particular it references South Finegayan which lies in the limestone structure province with elevations that range from 500 to 600 feet above sea level. The coastal areas range from 200 to 900 feet stretching from the base of the cliff to the shore. Mr. Sana further explained that the ponding basin was strategically placed at its present location due to the elevation of the northeast to southwest pattern and the flow direction of the storm water runoff; soil erosion does not pose a problem in the area and will not affect the surrounding property owners.]

<u>Richard Sana</u> the position by DPW suggests the entrance leading to the FAA Road and the subdivision be expanded from 40-feet to 44-feet. We are doing that. We are going to make the access, the entrance go to the subdivision uniform with the right-of-way in the subdivision. We're looking at the position statement from Guam Environmental Protection Agency for the first time a few minutes ago, and we understand that the ... where the the federal regulations associated with this is and we will sit down with Guam EPA and we will discuss whatever it is to comply with their concerns. We have sat down with them already and we're working out all the issues here; they're recommending so we will look into those recommendations see how we will meet and satisfy their concerns.

<u>Commissioner Oh</u> I had a question. Since you mentioned that this area is going to be a new industrial area trying to move away from the Harmon Industrial. There was a mention about the whole CCR. Could you talk a little bit more about the CCRs and the different types of conditions; is this pretty much set in stone or is this still preliminary?

<u>Don Sadhwani (Applicant)</u> I think I can answer that. To answer your question we are working on that the CCR. I would also like to address Teresa's (Mr. Sadhwani was referring to Commissioner Limtiaco) question. We are not allowing any barracks in this property. That's one of our things; we already have 2000 barracks over there and so there is going to be no barracks in there. We are working on conditions. The landowners will enforce this association. We are going to form that. Once we sell the lots then we will form the association and we're going to enforce that. Certain things like nobody can live over there; we want it to be like stateside

industrial park. We are not going to allow any buildings in there it's going to be either a concrete structure or butler building that is properly designed. So, all those basic things we're working on right now we're going to put those in. Like Marvin mentioned, that supersedes what M1 allows. The reason why the half acre ... the other properties and you have three acres everyone comes around and asking I need a smaller piece. So, I did this subdivision not for the buildup but for local businesses that want a small lot. The thing is we can always join two lots and make it a bigger lot. So, if you want to build a 4,000 square foot warehouse or 6,000 the half acre is enough. It's very easy to join two and have a big piece. Through my experience we designed for that. And I am also financing for the small businesses when they this property so that they can pay slowly. My whole thing was design for the local thing. I'm not gambling on the buildup whether it comes or not. If it comes we will entertain them but it's basically designed for wholesalers and small light industrial businesses. We'd like to answer any questions you have.

Commissioner Oh will there be a common area fee?

<u>Don Sadhwani</u> yes. There is going to be a common area fee and we are also planning to put in security systems and someone who is going to maintain the landscaping (I was coming to that too) because we are going to put some landscaping and the association would be responsible for maintaining that besides each individual lot owners. So we are not going to allow anyone to put trash, broken down vehicles and all that kind of thing we're kind of working on that. We don't want to make it too strict either then we won't sell any. It's a fine line and we're kinda working on that.

<u>Commissioner Oh</u> the ponding basin will always stay private; this ponding basin that you guys have proposed will this always stay

Commissioner Bathan it's not for sale?

Don Sadhwani no, it's not for sale.

Commissioner Oh what I'm saying is that would it be handed over to the government.

Richard Sana if it's required to if it's part of the dedication like the roadways, the right-of-way; if we are required to we will turn it over.

Don Sadhwani if not I think it will be maintained by the association.

<u>Commissioner Oh</u> that's what I was trying to get at because I'm assuming the common area fee because I've seen many ponding basins that have been neglected and hasn't really been maintained. Like a few days ago they found human remains in one of the ponding basins; we don't want that stuff happening and repeating itself. If there will be a common area fee I am assuming that some of those funds will be reserved towards maintaining this ponding basin.

<u>Don Sadhwani</u> that I don't know, I think Mr. Marvin can answer that question. Are we required to turn also the ponding basin over to the government?

<u>Marvin Aguilar</u> dedication of easements to include ponding basin that's normally ... that deal is struck with the agencies. It could be included or excluded. If your CCRs include the maintenance

Don Sadhwani I think we should include it so we could maintain it.

Commissioner Oh I think it's best that it's included within the industrial subdivision.

<u>Don Sadhwani</u> then we will do that. But all the other infrastructure which we will turn over to the government as required by law. What we're trying to do is present them, give them a lot that's got water, power, sewer; so they've got a lot with stub-outs so they are ready to build and to hook up to that without each one having to go and do it themselves.

<u>Commissioner Oh</u> my concern here is storm water runoff. I've seen the topography and it does seem like the water will be running towards you have the lower elevation towards the ponding basin. Do you guys plan to do any grading during this subdivision development?

Don Sadhwani I think so we do ...

Commissioner Oh there will be some grading done?

Noni Amar each lot will have grading and the location where the ponding basin is going to be located to the lowest portion of the lot.

<u>Commissioner Oh</u> my question is will there be conditions in place to prevent let's say a new lot owner to prevent them raising the elevation of their lot or changing the elevation?

<u>Don Sadhwani</u> they will be completed ... what we're trying to do is give them a ready lot that they can build on not that they go higher but not go lower because they will be all uniform based on the water runoff that's what I guess the engineers are designing to do. To answer your question if they can go lower? No, it will be ready to build that is our intention.

Commissioner Oh paved?

Don Sadhwani yes paved outside, but the lot itself will not be paved.

<u>Richard Sana</u> and sir the concern with runoff the less impervious surfaces you have the better it is the less water runoff. You incorporate the landscaping and all this and then the runoff from the roof can be diverted to their own individual ... it was suggested by BSP at our meeting was use like rain garden to divert those roof runoff.

<u>Chairman Rivera</u> good. I'm glad you mentioned that ... one of the concerns the Commissioners had was workers' housing.

<u>Don Sadhwani</u> no, no that's part of the CCR. We don't even want anybody to live in there. What we are trying to do is keep it clean and maintain it. And also the traffic there the buildup happens and we need to support industry and they all need warehousing so we're trying to keep it in that one area.

<u>Commissioner Bathan</u> I have a question on the size of the warehouses that you intend to build on each lot. Is it up to whoever will buy the lot or is it going to be built before you sell?

<u>Don Sadhwani</u> it's going to be both; some lots we're going to sell, some I'm going to build myself and we're going to build basically what can ... according to law what is permitted on that. So, if it's a half acre and it's permitted like 6,000 square feet so we'll build that or lower. And if we need to build a larger one then we join two lots and build a 12,000 square foot warehouse.

<u>Commissioner Bathan</u> because I'm thinking about like on the half acre lots and if you build a warehouse; I don't know the logistics of the trucks, containers coming in, 20 or 40 foot containers coming in and making a turn and having access to the lot and loading and unloading then going back to the road which is a 44-feet right-of-way. I'm really concerned about the entrance.

<u>Don Sadhwani</u> well that's what (undecipherable) and they do for the docks; you back up the container and just leave. You have a 44-foot easement for that but each landowner with their design they have to get approved by DPW. They will not be giving them that they can do this or that so whatever is permitted by law I think that's what will happen.

Marvin Aguilar per the government administrative rules and regs for industrial lots the minimum width for ingress/egress into each particular is actually 12-feet. They're kinda like blending it with residential type uses; but the minimum is 12 and the maximum I think, can go up to 36 which accommodates big trucks.

<u>Chairman Rivera</u> I have a few here. You know the calculations for your sewers and water line. Your consultant actually recommends a 6-inch diameter pipe in your for your sewer line. I'm sorry he recommends an 8-inch.

Don Sadhwani we changed it to 8-inch.

<u>Chairman Rivera</u> because your application or your report here says the sewer line is 4-inches in diameter [Mr. Amar confirms that it has been changed, the main collector line]. Going to your drawings your site plan of your lots. Your entrance on Route 3 there's a 44-foot right-of-way and then you notice as you go into your property there's a 40-foot ---

<u>Don Sadhwani</u> we changed that. Frank Castro, he's supposed to be here; we already changed that to 44-foot. When we were going through this process we had it 40, but talking to the various agencies they recommended to 44-foot so that's going to be uniform.

<u>Marvin Aguilar</u> one of our concerns about this and we did recommend that it be expounded is that the impact to the remaining portions of the lot so we wanted to make sure that it was within code or subdivision requirements.

<u>Chairman Rivera</u> well this is unique. This is the first time a subdivision for an industrial park. We're used to seeing subdivision for housing and things like that but it's basically the same process. There's just kind of one thing that stuck in my mind is as you sell this property; let's say a Toys R Us vendor comes in and wants to rent a warehouse and a guy next door wants to do a automotive shop i.e. change of oil, full pledged paint job that where the environmental issue comes in.

<u>Don Sadhwani</u> here's the thing. If you see this portion ... that's coming in the CCR. If you look at this map the back portion is where we are going to be doing for people that's less desirable like doing what you're saying. That portion is the one we're going to allow for them to do that repair or whatever it is. But the front portion is where we like warehousing. We'd like to have everyone to have warehousing but Guam is small we can't sell it strictly for just one purpose. So, we're going to have like ... I know everybody wants to be in front talking to people so depending on what it is so we're going to stipulate that on these lots you can do this and these lots it has to be a warehouse. That's part of our CCRs how we are going to control it.

<u>Chairman Rivera</u> environment issues and concerns if it goes to an automotive shop for example or

<u>Don Sadhwani</u> I think ... that question I can't answer because depending on what is allowed by law I think they will have to follow the law with that one. But as far as businesses we have that for the back portion and we'll put that in the CCRs that they will have to be there. They have to go somewhere. They have no choice they can't go in an "A" or "R1" or whatever so we have to accommodate them and them in the portion in the back and that's what the CCR will determine if you want a lot in front you gotta have a building that looks good and have a good fascia and so forth. That's what the idea is and that's working on the CCRs and separate it out.

<u>Vice Chair Arroyo</u> for those kinds of operation that you want to put at the backside, are you anticipating in your CCRs that any of that kind of work needs to be done indoors or will they be allowed to do it on open ground.

<u>Don Sadhwani</u> well what I've been reading is I'm reading some other CCRs from the States and what they're saying is that it shouldn't be visible from the main drive. We're going to some language in there and at the same token I don't want to enforce that that I can't sell anything. So, we are ... it's a very fine line with saying that you have to keep it neat, tidy and not have

anything exposed. Not putting down the law that you can't do that...by law you can do that so anybody buying a property will tell me why can't we do that. So, we can recommend in a slight way that we're not going to allow this but

<u>Vice Chair Arroyo</u> so let's say they're doing this work outdoors and ---- (applicant interjects)

Don Sadhwani they'll do it in the warehouse not working outside.

<u>Vice Chair Arroyo</u> so it will have to be done indoors. I'm just thinking that all this stuff will go on the surface and then runoff to the neighbors.

<u>Don Sadhwani</u> no, no it has to be warehousing. We're not going to permit open you know open air doing repairs and stuff like that.

<u>Richard Sana</u> and I think also they have to go it's a very strict regulations that you have to go to Guam EPA --- there's also preventive measures that they're required to do; containment areas and any spills they don't recommend flushing they recommending scrubbing or absorbing with some absorbent material. So, that I think would be addressed at the permitting stage.

<u>Commissioner Limtiaco</u> you know Mr. Vice Chair you have a good point, and I have a follow up question to the Chief Planner. Of the adjacent lots are all zoned currently M1? Or are there other zones?

Marvin Aguilar there are some properties that are zoned commercial.

<u>Commissioner Limtiaco</u> which ones are they? You bring up a good point; looking at the back it could adversely affect a different zone. So, I didn't get to see those maps

<u>Marvin Aguilar</u> I'm sorry, we didn't include the zoning overlay here; but, adjacent properties are all M1. The amendments that were made to this area front Route 3 was done closer towards the hospital change it up to commercial. But it's pretty much homogeneously M1. The thing is that these are other large tract properties here so this is that first project to be developed.

<u>Commissioner Bathan</u> I have a question for the applicant. You mentioned earlier that the part of your CCR is to provide security? Security camera? Are you also planning to fence the property? The whole 37 acres?

Don Sadhwani yeah, security cameras, fence for the whole 37 acres.

Vice Chair Arroyo what kind of fencing are you looking at.

<u>Don Sadhwani</u> well, I'm kind of debating between ... we've some (undecipherable) that we're getting. We're getting some materials from the States; so the pipes and all. So, we're looking at

that right now we made that determination. It will be either chain-link or the concrete with chain-link so we're looking at that. But we definitely want to fence that.

<u>Commissioner Oh</u> I would highly recommend some type of concrete with chain-link because there are environmental concerns here. You did also mention at the same time that the heavier (I guess), the uglier businesses will be positioned towards the rear of the property.

Don Sadhwani I was actually leaning towards full concrete that's what I'm leaning towards. Putting like so there's security because people who are going in there also want security.

Michael Borja (Executive Secretary) you guys didn't get the EPA report? [Chairman Rivera responds that the Commission received it at the beginning of the meeting.] You got the Waterworks Report? We need to make sure you get the Waterworks report. The two reports kind of touch on the same issues about water pressure and the fact thatWaterworks ... the EPA mentions that you have two dead end roads in your subdivision and they're concerned about the water pressure at the dead end so just something for the engineering side to look at especially since they're bringing up the same kind of issues.

Richard Sana actually there is no dead end roads here. The whole property is basically accessible to either the creation of this 44-foot right-of-way and also the bull cart trails.

<u>Michael Borja</u> so you're going to incorporate this bull cart trail? I don't think your water pipes go all the way around; the water pipes come to an end at the end of these roads. That's the concerns that both Waterworks and EPA had on the pressure of the water especially for water pressure for the facility and water pressure for fire purposes.

Richard Sana no, well no we're not well we need to investigate that because according to Noni here he actually went and surveyed where the utilities are located, and he found that there's a 16-inch water line where right across the, right across the it's actually on the same roadway the FAA road. I actually saw that and took a picture of that myself. We were concerned about that because we checked what the fire flow requirement was to be and we were under that so they require 1500 gallons per minute so we also adjusted the calculations to meet the fire flow requirements.

Chairman Rivera any other questions for the

Commissioner Oh just a question for the engineer; was a fire flow calculation done?

Noni Amar yeah, yeah. We incorporate the fire flow demand per Guam Fire Department. Actually our first calculation was kind of low on that side we used minimum of 500; but when we consult with EPA they said to check with GFD. So I went here so it's 1500 gpm so we calculate and increase pipe size from six to eight so it's eight right now.

[Brief discussion on the correct calculations. The final calculation figures were given to the Commissioners for their perusal.]

<u>Chairman Rivera</u> for the record we went ahead and received a update on the design of the water distribution main and the design of the sanitary sewer line this is an update and also it was signed and certified by the professional engineer. And this is more like an update.

If there's no questions for the applicant at this time we'll go ahead and open it for public comment then we'll bring you back again. So at this time we'll go ahead and open the floor for any public comments out there. I see Mr. Angel, EPA. Just come up and introduce yourself and make your comment. I know we got your report just recently and you're just going through it.

Public Comments

<u>Angel Marquez (GEPA, Acting Chief)</u> I apologize for the delay of the position statement. I have been working with the owner and for his request I'm going to put it in black and white and if you notice it I sign it for him because he's not available today to sign it.

Okay, I'm not going to read one by one; but I was want to (undecipherable) context. So, the comment for area; for the waste water treatment system, first of all I just want to let you know that Guam EPA is not anti-development, used to be, but we are pro-development but we cannot compromise environment for any development we just want to make sure that this position that Guam EPA in this administration.

And for the wastewater treatment the issue here is timing. The wastewater treatment plant that will be utilities to treat the waste from this facility will be the same wastewater treatment plant to be used by the military. During our last meeting I ask the question where we are in the secondary treatment re-habilitation the answer was there was a budget or there's a budget if the Congress approve it (Sic). So you have the U.S. Congress to approve this project. It is the timing issue that we're very much concerned (undecipherable) the facilities under Court order and the status of the (undecipherable) discharge is continuously in violation with the clean water act. And also in addition to that the conveyance or the collection system is our concern. You don't want to have another Harmon Industrial Park where you connect 8-inches line to a 6-inch collection system where you create a bottleneck that will allow the overflow of raw sewage to the ground or to the road. The reason for us to ensure the proper design will be followed allowing the maximum use based on the (undecipherable) of the property as a basis of design to calculate what it is the allowed collection or distribution system. What it means 8-inch might not be enough if there is two or three laundromat that will be come up there (sic). So that's why we're saying here that the design has to be based on the maximum allowed density of the facilities to ensure that the development that area alone will be in the future can be utilized by any other development because once you have that utility there in five years the neighbor can hook it up that's by law. They have no control. GWA has no control. It's just by law they can.

One is enough for the developer because what will happen if that thing happen that there will be a bottleneck on the lower system that it will back up to their system that is for sewer.

And for the water the main concern for water is pressure. And also it is true that there are two service line that serving the area (Sic). The 16-inch line that is the transmission line that collect water from the GWA production wells that is delivering the water all the way to Tamuning area including our new hospital area and all the Tumon area. And as far as I know the only facility that's connected to that is the Ukudu used to be the Younex facilities. Right now the sewer in the area they are the (inaudible/undecipherable due to excessive noise) coming from Liguan that goes straight to the pump station. Those are not adequate to support such development. So you have to work with GWA. The water main coming from Liguan Terrace that is serving those area right now. I think that's what you're seeing out there. But if you can work with GWA if they allow you to utilize the 16-inch (undecipherable) a negative impact to the existing facility that are using that system right now. And there is project by GWA for wells but timing again is an issue and those well in plan five years or longer but still not in place right now. Our concern is this development not only this but the coming development within Route 3 is our concern. We already approved Younex okay that's fair to approve what we have approved in the first place. They need to have that occupancy that's what we agreed in the first place. But if you added more similar facilities eventually then you are actually creating another concern and that is right top of the water lens. Maybe we can compromise but not on that area. That area is where most of the water that we're drinking are coming from. So the concern for the water again is it will be wise for the developer to work with GWA maybe to contribute another wells that will directly supporting the project that's our recommendation.

<u>Commissioner Oh</u> you did mention that on item number – potable water supply item number 3; it states here that existing water distribution serving the property is not adequate to the required fire flow.

<u>Angel Marquez</u> because that is a 12-inch line that we're talking about that's serving the general area now. As I said, I think the only project that is connected to the system is the Ukudu facilities. So with that if you're going to do the testing for fire flow I don't think you can have a 1500 gpm even though they have an 8-inch line in the system.

Don Sadhwani do we need to go to GWA for that or EPA?

Angel Marquez with GWA; we work with GWA. That's for the water. The recommendation for storage tank is just an accurate (undecipherable). I think that was done the Ukudu facilities had just done to accommodate the fire flow. Once the sale the property to each individual there is...each individual have to provide their own fire flow requirement and that would be a challenge for them. Maybe one, two facilities but they have a common fire flow requirement then the whole facilities could be developed because everybody can provide a fire flow requirement.

The storm drain is an issue; yes it's an issue again is because the lens and the erosion. This is how it's being developed right now. I mean how the storm water management by law they are required to comply to the 2006 CNMI/Guam with that standard they are required to design 25-year storm okay. Before that it was 100-year storm. If you notice it Liguan Dededo area they have a huge ponding basin that is empty almost all the time. The reason for that the design is based on 100-year storm it's about 100-inch a day. But the law now is 25-year storm and our recommendation for each of the facility 53 ponding basin could be there but each of the facility half acre lot they are only allowed to design 25-year storm that means that's an overflow. Anything that goes beyond that say we design for 50-year storm then there's a water that flows somewhere else. My recommendation our recommendation on this is for developer to design a ponding basin that will accommodate maybe 50-year storm or the common use which is the road in (undecipherable). There should be problem on this because the percolation on there is fast.

[Mr. Marquez continues with a lengthy explanation on ponding basins, design, and overflow]

The last item is the solid waste and the hazardous waste. Yeah you mentioned earlier about they will become hot a spot. Somebody go up there and install chemicals or other hazardous waste we don't know. So we put it as a hot spot that means your ponding basin has to be designed with a pre-treatment just in case this thing spoil before it goes in ponding basin it has to be for a pretreatment for the ponding basin.

Commissioner Limtiaco how do you do that?

<u>Angel Marquez</u> the 2006 standard they have some mitigation on how they can do that. You know collect all this runoff goes to a certain small area before it reach the (undecipherable) and then it goes to the ponding basin.

[Discussion on the various types of pre-treatment designs]

Angel Marquez that's all what EPA ---

<u>Commissioner Limtiaco</u> Mr. Marquez, I know that Commissioner Oh has asked you about the fire flow calculations and the water distribution. We were just issued, the Commission was just issued new revised calculations and so now the calculations have been updated. For example for the fire flow the old calculations were for 3,000 gallons per

Richard Sana it was 500 and now it's 1500 gallons.

<u>Angel Marquez</u> the fire flow could actually measured on site. It will be measured at the point of connection where the water reconnection is.

<u>Don Sadhwani</u> Guam Fire Department requires before you do anything to go get a fire flow test. Then somebody does that and verifies that.

<u>Commissioner Limtiaco</u> my question to Mr. Marquez is just to understand whether or not his position has changed based on the new information given. I don't think he had the benefit of receiving like we did any of this information until today. That's really important considering he issued position statement with suggestions.

<u>Commissioner Oh</u> this design was based on the 16-inch line is that correct? [Mr. Sadhwani responds "correct, correct"] But what EPA representative is mentioning is all the other properties within the area is served by the 12-inch line. So this calculation itself would have to be false.

Don Sadhwani I disagree because the 16-inch line came from GWA.

Commissioner Oh so the plan was to connect to the 16-inch line.

<u>Don Sadhwani</u> yeah, and the 16-inch line that we were connecting is connected to a 24-inch line on Route 3. It's a big line.

<u>Richard Sana</u> we would have to go through GFD ... he won't get approved on this unless we don't do that. You have to understand too that the 1500 gallons per minute has to be maintained for a 10-hour period each day.

<u>Angel Marquez</u> during the maximum demand it's very tough. So it comes out ... storage tank on site is the solution for that.

Don Sadhwani we'll work that out with GWA.

<u>Chairman Rivera</u> thank you Mr. Marquez. Thank you for that report. I'm really glad that EPA and GWA's position statement came in and would help you guys in the right direction and you know you got their statement you just gotta work with them to get the result.

Any questions for any other public comments?

<u>Commissioner Oh</u> from our position we really appreciate the fact that you guys are considering putting up some type of concrete enclosure, to enclose the property itself. I think that's quite important for this type of development because it is an industrial park.

<u>Don Sadhwani</u> it would be ... the base would definitely be concrete, but like I mentioned to you before I don't know whether we're going to have fence in between or total concrete.

Commissioner Oh we weren't even looking total concrete.

<u>Don Sadhwani</u> the base yeah I can assure you will be concrete. It has pillars, chain link pillars, chain link, but the bottom will be concrete. That's no question about it.

Commissioner Oh and that's very good. That's very responsible of you guys to do that.

Don Sadhwani thank you.

<u>Chairman Rivera</u> if there's no other public comments then public comments are closed. We're back to you guys again. I'm really glad that EPA is here and I'm really glad that we got the ... as a matter of fact we pushed for EPA's position statement. It's basically because the Commission had some environmental concern. Gentlemen, we all know where your property is sitting. We all know that it's in our drinking water lens. So, we just want to make sure that whatever's in there our water is protected regardless you know ... and it's a warehouse facility and it's unique and that's why we want and I'm glad they had their position statement so you can be aware of their position so you can move forward and correct it you know with your group, your engineers.

<u>Richard Sana</u> we don't mind and sitting with Guam EPA again and going through the whole process with them. It was part of their recommendation that we came up with the 1500 gallons per minute per day was through the sit down with EPA and we will do it with any other agency that have any concerns with this project.

<u>Chairman Rivera</u> any questions for the applicant? [None noted] You want to take a five minutes recess and then we'll come back and move forward.

[Chairman Rivera called for a 10 minutes recess at 3:00 p.m. and reconvened at 3:10 p.m.]

<u>Chairman Rivera</u> okay we're back. Gentlemen, please join us we're back from our recess. Commissioners, before we act on it any other final comments or question.

<u>Commissioner Bathan</u> I have one last question. Regarding the entrance to the facility you mentioned you would be using the adjacent lot. Would that be the only entrance to the facility?

Don Sadhwani that's correct.

<u>Commissioner Bathan</u> how about the right-of-way where there's a bull cart trail. Are you going to develop that?

Don Sadhwani no.

Commissioner Bathan it's not going to be paved.

Don Sadhwani I think the government they want to develop it for other (undecipherable).

<u>Commissioner Limtiaco</u> so Chief Planner, did we get a position statement from the Fire Department, GFD?

Marvin Aguilar no ma'am.

<u>Commissioner Limtiaco</u> Mr. Chair, usually when we look at residential subdivisions granted this is our first M1 subdivision; but when we look at residential subdivisions, this Commission even if we don't receive a position statement from GFD, one of the discussions we have is fire truck access especially if you recall the Yigo residential subdivisions. That was a big issue whether or not a fire truck can turn around at a dead end; whether a cul-de-sac is necessary or other access. This is a ... the access that we have now, and the information we have today is a little ... it's different then what we have in our packet. We really didn't have a lot time to review this.

<u>Commissioner Oh</u> none of these bull cart trails would actually be developed? [Mr. Sadhwani responds "no."]

<u>Commissioner Bathan</u> that's what they said. That's why I'm concerned on the access for fire trucks if there's only one --- [Mr. Sana interjects]

Richard Sana if you look at the bull cart trail and and normally they vary in in width. The widest is 12-feet for the whole bull cart trail, and the property owners adjacent to it they're not obligated to improve the whole 40-foot a right-of-way on the bull cart trail. They're only ... from center line 20-feet to their property is their only obligation if they need that access. But since they are creating their own access and entrance that's why they're there's no obligation actually to

<u>Vice Chair Arroyo</u> these bull cart trails I mean these access roads leading to bull cart trails are dead ends right, and they'll be blocked by your fence that's going to surround the perimeter so [Mr. Sadhwani interjects]....

<u>Don Sadhwani</u> the thing is we've left that there. When the government paves or opens the road up that could be open.

<u>Vice Chair Arroyo</u> but I think the concern is if a fire truck needs to get into one of these properties that are dead end by that bull cart trail will they have sufficient space to turn around.

<u>Commissioner Limtiaco</u> you know Mr. Chief Planner, do you know off the top of your head what that radius is? I know we've discussed this before.

<u>Marvin Aguilar</u> it's 80-feet. But a cul-de-sac cannot be applied to this by virtue of the Subdivision Law. It can't go beyond 700-feet. And the fact is is that the bull cart trail does exist right now. So, at best, by virtue of the property's location to these bull cart trails, they've met the basic ... the minimum requirement for providing access to other lots.

<u>Commissioner Bathan</u> but if they fence in the property are they going to fence including the bull cart trail or

<u>Richard Sana</u> if you look at the subdivision map there you look at the actually bull cart trail it's the one that's shaded. There's a setback there that's that's you know there's still that strip there that shows the setback there and it's left open.

Vice Chair Arroyo so you're not going to fence that area.

<u>Richard Sana</u> the fence can always be open because the right-of-way ends right here at the end of the property.

Chairman Rivera you know what we're trying to get right?

Richard Sana yes, yes I understand. It's the fire

<u>Commissioner Oh</u> it will be most likely be a requirement from GFD during the whole permitting process.

Commissioner Limitaco so maybe we need to have that as a condition to the final approval.

[Commission has a brief discussion amongst themselves regarding access for emergency vehicles.]

<u>Richard Sana</u> how about maybe on that on that section there where it connects to the bull cart trail and they just probably put a gate there, a gate in case the government comes in and and makes the improvement and they can actually open up the gate because of the access and have the circulation.

Chairman Rivera I guess we ... Marvin, they can work things out with Fire Department ---

Vice Chair Arroyo it should happen at permitting anyway.

Chairman Rivera we can make it a condition that they should address

<u>Commissioner Oh</u> can I ask a question to the Chief Planner. Marvin, I'm looking at the survey map and one of the lots below, Lot 5316; they dedicated a strip for a right-of-way. Was Lot 5315

because it borders two areas the bull cart trail required to dedicate a sliver of their property for the bull cart trail?

<u>Marvin Aguilar</u> well this subdivision map does not show that. It actually just shows the variable width alignment of the bull cart trail. But in the proposed subdivision, it shows the 20-foot setback.

<u>Commissioner Oh</u> so they're dedicating a portion to their property to be part of the bull cart trail? [Chief Planner responds "yes sir"] And is it going to be portioned out as a right-of-way?

<u>Marvin Aguilar</u> well, it's showing that it's portioned out not inclusive of the lots to be created. Whether they had actually given it a right-of-way lot number and it

<u>Commissioner Oh</u> so when they do the subdivision map ... they have improved the width of the bull cart trail on the two sides of their lot.

Marvin Aguilar yes sir. And basically what that does it right fits the bull cart trail for public use.

[Lengthy discussion continues on bull cart trail. Chief Planner explains that the applicant is identifying at a minimum 1858 square meters or half acre for the smaller lots, and that it is exclusive of the setback and that there was some thought put into this in terms of accommodating the right fitting of the bull cart trail. Mr. Aguilar further explained that the property line is at the center line of the bull cart trail and the developer is reserving 20-feet of the strip for future development. Mr. Borja added that there are a lot of bull cart trails that go through this area and some of the bull cart trails and/or easements are perpetually being maintained by the military as part of the federal access land return and can be found throughout this whole area.]

<u>Chairman Rivera</u> Marv, can we set a condition ... you can work out something with the Fire Department. We'll just make that as part of the condition that you shall ensure you coordinate with the Fire Department, make sure that your access for emergency vehicles is accommodating.

Any other questions? [None noted] No questions, you want to move forward ---

<u>Commissioner Limtiaco</u> Mr. Chair, I'd like to move to approve Application No. 2015-26; the approval of a tentative subdivision in an M1-zone to create an industrial park consisting of 51 lots, on Lot 5315 in the municipality of Dededo subject to the conditions setforth by the Chief Planner in his staff report specifically; that,

a. The applicant must work with DPW to provide adequate road widths to facilitate safe and efficient egress and ingress to and from the subdivision and that should coordination should include input from the Chief Planner. **And I would like to amend that**

recommendation and also add that there must be input from the Guam Fire Department;

- b. The applicant provide full improvement infrastructure to address the intended use on operational needs of an industrial park subdivision. This shall be vetted and approved by the pertinent government entities and as required pursuant to Title 21GCA, Chapter 62, Section 62401 at the time of approval of this request and Title 21GCA Chapter 62 Section 62402 at the time of the applicant's approval request of the final subdivision;
- c. That CCRs must be submitted to the Chief Planner for his recommendation and that the CCRs shall be reviewed by the Chief Planner and by the Chairman and recorded for every lot at the Department of Land Management. [I just want to put a footnote here that by using the word "special uses" that does not include applications for temporary workforce housing or any variances that must have an independent application that goes to the Chief Planner and the GLUC]:
- d. Plans prepared for the final subdivision approval shall contain elements of surface water runoff containment as recommended by the BSP, Guam EPA and that these plans be available to this Commission upon the submission of its application for final subdivision approval.
- e. That the tentative subdivision plan be reviewed and approved by the Survey Division of the Department of Land Management in the appropriate timeframe.

<u>Chairman Rivera</u> there's a motion for approval as stated by the Commissioner Limtiaco indicating the recommendation by the Chief Planner's recommendation listing down A thru E and whatever added that she has indicated. Any second?

Vice Chair Arroyo I'll second.

Chairman Rivera motion seconded by the Vice. Any final discussion?

<u>Commissioner Limitaco</u> did you want to include the fence in the motion or a condition for the final?

Don Sadhwani you can put it in, I'm going to do it anyways.

<u>Commissioner Limtiaco</u> Mr. Chair, I would like to amend my motion to include that the applicant must include a fencing plan when he comes back for his final approval of the subdivision.

Vice Chair Arroyo I will second the amended motion.

<u>Chairman Rivera</u> there's an amendment by Commissioner Limtiaco, second by the Vice. Any final discussion? [Note noted] If not, we'll go ahead and vote.

<u>Chairman Rivera</u> all in favor of the motion to approve say "aye" [Chair Rivera, Vice Chair Arroyo, Commissioners Limtiaco, Bathan and Oh], all oppose say "nay."

[Motion to approve as amended passed unanimously; 5 ayes, 0 nay]

Gentlemen good luck. Next item on the agenda ---

V. Administrative and Miscellaneous Matters

<u>Chairman Rivera</u> we're in the administrative and miscellaneous matter. Many update Marvin –

Michael Borja the Governor signed into law two bills that relate to the Guam Land Use Commission. The first one had to do with the federal access land; zoning, when Mr. Atkins came in. That was completely revamped; basically it just comes down to saying that the whole section was taken out and says; notwithstanding any provision of law all federal excess land returned by the Government of Guam to the original landowner shall be designated as agricultural zone "A." The original landowner and all subsequent landowners may apply for a higher zoned designation by applying with the Department of Land Management Planning Division and processing their zone change through the existing statutes, rules, regulations, procedures and policies to obtain approval for their zone change request.

So, that clears that one up.

<u>Commissioner Limitaco</u> so is there a time limitation, time limitation and it's the original landowner?

Michael Borja no, anybody.

Vice Chair Arroyo they have to go through the process.

<u>Michael Borja</u> it basically just says that when it's returned back you make it "A" and anybody thereafter that owns the property they can change it anyway they want but they have to go through the process.

And the second one is the new public law which was introduced on behalf of the Mayors because I guess they were feeling kind of inadequate that they weren't being asked for their opinion on zone changes and construction forums. So, I had to intercede on this one because they were only going to amend the section of the law that deals with the Mayors and the Mayors' Council. It's not very long but it basically allows empowers the Mayors and the

Municipal Planning Councils the right to review and express their view on all variance applications, zone changes and government leases involving the land within their district.

For the Guam Ancestral Lands Commission it states that the Director of Land Management serving as the Executive Secretary to the Commission shall inform the Chairman and members of the Guam Land Use Commission meet and amend the GLUC zoning and construction forms to provide for a written portion or section on the form indicating the Mayors' review, expression and/or position on the matter.

In otherwords, make sure they are on the checklist to be in attendance at the ARC and comply with all the requirements of the ARC.

[Discussion continues for a lengthy period on the participation of the Mayors and the Municipal Planning Councils. Mr. Borja provides an example of a summary zone application in Tamuning that had been approved and that the Mayor and/or the MPC of the municipality were not given the opportunity to make comments.]

Chairman Rivera any news on Parks and Recs?

Vice Chair Arroyo before we get to that because it falls in line with what you said about the Mayors sitting on the ARC. I was asked by the Chairman to take his seat on a couple of subcommittees (the GVB sub-committee) and I've been to a couple of meetings and one of the subcommittees that I'm sitting in the destination management council committee (DMC). At that meeting That sub-committee is tasked with coming up of ways to improve Tumon to attract more tourists. And one of the things that they are looking at doing is setting up Business development something similar to what Waikiki is doing in that there are rules and regulations for all the businesses that own properties or buildings in Waikiki to have CCRs more or less. And that's what they want to do in Tumon. They're still trying to work out how they can bring that about, if it's even possible. One of the things that they did bring out was that they thought would be in the best interest of Tumon and the rest of the island if somebody from or GVB were allowed to sit on the ARC as well. I said, well do you want to look at every application that comes through because the ARC does do that and they said no, no we'll only be concerned with whatever happens down in Tumon. And that's an executive order; I don't know how that

Michael Borja don't we have auxiliary members?

<u>Marvin Aguilar</u> yes, as ex-officio. It may have been about ten years ago but they have been, historically wanting to keep away from our process.

[Lengthy discussion continues regarding GVB's involvement with ARC on projects and/or developments in the Tumon and in the surrounding areas (i.e., Alupang, Camp Watkins area)

<u>Vice Chair Arroyo</u> the other thing that was also a big topic for discussion at one of those meetings was the plan to expand the Fujita pond. That's gotten real controversial. If they do implement the plan that is being proposed right now is going to have a portion of the development extend over the seashore reserve, and they were acknowledging if that is the case then they need to come to the Guam Seashore Protection Commission for permitting. It would be good for us to take a look at that. There's a whole lot of controversy of course of the harm that fresh water and dumping more fresh water into the bay is going to do for the sea life there. A lot of the recommendations that I'm hearing is that if the property owners in Tumon improve their storm water catchment systems a lot of the water that flows down in towards Fujita area would be captured by the property owners themselves. The problem with that with some of those folks up at GEDA was that a lot of people do have these catchment systems in place, but they don't bother to clean them out. So all the drainages are clogged up and the water doesn't go down to where it's supposed to go just flows over and then right onto San Vitores and then down the street.

[Discussion continues on Fujita Road and the flooding situation in Tumon. Vice Chair comments that the Commission has discussed this situation before and wondered if the matter should be elevated to the Commission level by meeting and talking to property owners in Tumon on how to retain storm water on their properties. Mr. Borja added that you cannot build too many other ponding basins because the ponding basin at Fujita is a pond and not a basin and the water level is very high. Everything around there is sand so all the water will eventually work its way into the sand and seep into the ocean. This ponding basin is trying to create a larger catchment and the overflow will do what is going to happen anyway and the concern of certain people is that the flow will create a tunnel area of the flow but it will happen anyway.]

<u>Commissioner Limtiaco</u> if you are done, I have an announcement (official Minutes). I would like to inform everyone that I have a new position, and I now work for the Office of the Governor. And so I would like you to all know that my directive is very, very specialized; it deals with the Governor's initiative on climate change. But, I needed you to know that I now work for the government and that has changed me as a board member. I personally do not believe that my new job affects my ability to think critically and bring up issues and decide on issues that this Commission reviews on a regular basis. And if I feel that a conflict of interest does exists I will certainly let you know or you can let me know and I will recuse accordingly.

<u>Chairman Rivera</u> sure, good thanks for that.

Commissioner Limitaco do I still have your permission to serve on this Commission?

<u>Chairman Rivera</u> sure, sure ... I know yesterday you kind of mentioned that to me. So, for the record

<u>Michael Borja</u> Commissioner Limtiaco, congratulations on your new job; welcome as a GovGuam employee, thank you for letting us know formally and to advise you now that as a Government of Guam employee you are not eligible for a stipend.

<u>Commissioner Limtiaco</u> and I have already informed our Recording Secretary.

Chairman Rivera thank you for informing us that and for the record it's there.

Commissioner Limtiaco I will assure you Mr. Chair I will be as critical as I have always been.

Chairman Rivera going back to Marv; have we got together with Parks and Rec about the

Marvin Aguilar yes sir. We had a formal meeting yesterday and we've discussed basically where they're at with this program and advise them on information trying to do. And worked it through with the Director of Land Management basically talked to them first and then hopefully sometime early next week we'd like to bring in the General Manager or representative of the new information that came out is that the flooding in Matapang is not caused by the hotel it's actually a DPW issue; it's a GovGuam infrastructure issue. Perhaps (and I'm talking a chance by saying this) perhaps GVB and the interest group that supports the hotel zone there may need to look at what the status is of the public infrastructure before they take ... whether ... take measures into their own hands because there's some interesting reports out there.

<u>Commissioner Limtiaco</u> do you think in regard to the Matapang Beach park issue and its relation with the Holiday Resort; do you think that maybe we could ask or not we as a Commission, but do you think maybe we can ask the island beautification task force so they can approach the Holiday Resort to adopt that park?

Marvin Aguilar well, it's interesting about that because we're actually

<u>Commissioner Limtiaco</u> because we don't have the authority and we don't really want to get into

<u>Marvin Aguilar</u> and that was ... Parks and Rec was They confirmed that it's really a volunteer thing.

<u>Commissioner Limtiaco</u> because if they adopt the park then maybe they'll also clean up the storm drain, water blast ---

<u>Chairman Rivera</u> or the GVB Guam Hotel Restaurant Association or even this group that advices him (sic). Maybe they can get together with the owner and kinda pressure to volunteering.

[Lengthy discussion continues on the Matapang Beach issue. Mr. Borja inquires on the issue regarding the canoes being parked in the grassy area of the park to which Mr. Aguilar responded that Parks and Rec is working with Mr. Pedro Leon Guerrero who is the President of the paddling association to make other arrangements so that the green area could go back for public use; discussion also included fenced area that belongs to Goodwind Development; egress/ingress into the hotel/beach park.]

<u>Marvin Aguilar</u> I don't know if they formally submitted any formal letter (Goodwind Development) but it appears that they're not going to be developing that property for that project (refers to the fenced off property next to the Koban.).

<u>Commissioner Limtiaco</u> so Marv are we going to hear from Goodwind? We need to hear from Goodwind because there is activity at the Tumon Bay Shopping Center. If this Commission remembers we kinda put their NOA on hold as a courtesy to them. Otherwise, time would be ticking. We can't not see the developing happening and then continue on.

Marvin Aguilar as of two days ago they've had discussion with the Case Planner (Mr. Frank Taitano) and they've actually provided a list of things that they're dealing with right now between...to address to the Commission. I think they're only doing what the Commission had addressed or what been brought to ... let me take that back; the information or the work that they're doing right now is nothing new to what the Commission understands; fixing their flooding issue, all the pipes

<u>Commissioner Limtiaco</u> Cris if I can, can I ask you to pull the Minutes of the last meeting and send it to us so we refresh our memory.

<u>Chairman Aguilar</u> okay Marv just keep on top of the Parks and Rec at Matapang and we'll try to resolve; maybe can force them not force them but have the hotel association have them adopt that park.

Alright, any other requests? If not, we'll move to our next item on the agenda.

VI. Adjournment

<u>Commissioner Limtiaco</u> motions to adjourn today's meeting, seconded by <u>Commissioner Bathan</u>; with all in favor.

The regular meeting of the Guam Land Use Commission for Thursday, September 24, 2015 was adjourned at 4:00 p.m.

Approved by:

Transcribed by:

Lawrence S. Rivera, Chairman Guam Land Use Commission

M. Cristina Gutierrez, Pro Tem DLM, Planning Division

Date approved: 10.22.2015

GUAM LAND USE COMMISSION



Chairman Lawrence S. Rivera Vice Chairman John Z. Arroyo Commissioner Conchita D. Bathan Commissioner Tricee P. Limtiaco

Commissioner Victor F. Cruz Commissioner Tae S. Oh Commissioner, Vacant

Michael J.B. Borja, Executive Secretary Kristan Finney, Assistant Attorney General

AGENDA

Regular Meeting Thursday, September 24, 2015 1:30 p.m.

Department of Land Management Conference Room 590 S. Marine Corps Drive, 3rd Floor, ITC Building, Tamuning

. Notation of Attendance	[] Quorum	[] No Quorum
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- II. Approval of Minutes
 - GLUC Regular Meeting of Thursday, September 10, 2015
- III. Old or Unfinished Business
- IV. New Business

Tentative Subdivision

A. The Applicants, Deepak and Kiran Sadhawani (Owners) represented by FC Benavente, Planners; request for a tentative subdivision for the proposed development of an industrial park for warehousing and other permitted M1 uses, on Lot No. 5315, in the Municipality of Dededo, in an "M1" (Light Industrial) zone, under Application No. 2015-26.

Case Planner: Jeffrey Baker

- V. Administrative and Miscellaneous Matters
- VI. Adjournment

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Facsimile: 671-649-5383



ATTACHMENT A

DIPÅTTAMENTON MINANEHAN TÅNO' (Department of Land Management) **GUBETNAMENTON GUÅHAN** (Government of Guam)



MICHAEL J.B. BORJA Director

DAVID V. CAMACHO Deputy Director

EDDIE BAZA. CALVO

RAY TENORIO Lieutenant Governor

Governor

September 15, 2015

MEMORANDUM

To:

Chairman, Guam Land Use Commission

From:

Guam Chief Planner

Subject:

Staff Report - Application No. 2015-26

1. PURPOSE:

- **a. Application Summary:** The applicants, Deepak and Kiran Sadhwani represented by Mr. Richard Sana of FC Benavente Planners, is requesting approval of a Tentative Subdivision in an "M-1 zone" to create an industrial park consisting of fifty-one (51) lots on Lot 5315, in the Municipality of Dededo.
- b. Legal Authority: Title 21, GCA, Chapter 62, Article 2, Section 62201 thru 62204; Article 4, Section 62401; Article 5, Section 62501 thru 62504, Subdivision Law. Title 18 GAR, Chapter 3, Article 2, Section 3219.

2. FACTS:

a. Location: The subject lot is located in the Ukudu area of Dededo west of Rt. 3 roughly across from the Ukudu High School and less than a quarter of a mile north of the New Guam Regional Medical Center. The entrance of the proposed development is to be located at the northeast corner of the pentagon-shaped lot via a proposed 40-ft right-of-way connecting to the existing 100ft wide easement, roughly a quarter of a mile northwest of Rt.3. Encircling this lot are properties of various zones ranging from "R-2","C","M-1" and M-2 as per the "Dos Amantes" Official Zoning Map F3-67S52.

Continuation of Memorandum
RE: Staff Report - Application No. 2015-26 – Tentative Subdivision
Lot 5315, Municipality of Dededo
September 15, 2015
Page 2 of 4

- a. Lot Area: 36.7 +/- Acres or 148,810+/- Square meters
- b. Present Zoning: "M-1" (Light Industrial) Zone per Public Law 30-211.
- c. Field Description: The proposed site is presently vacant and undeveloped, and is presently overgrown with various types of ground cover vegetation, small bushes and medium to large trees.
- d. Master plan: N/A
- e. Community Design Plan: Rezoned to "M-1" Light Industrial via P.L. 30-2111
- f. Previous Commission Action: None
- 3. APPLICATION CHRONOLOGICAL FACTS:
 - a. Date Application Accepted: August 4, 2015
 - b. Date Heard By ARC: August 20, 2015
 - c. Public Hearing Results: N/A
- 4. STAFF ANALYSIS: As requested by the applicant on the Tentative Subdivision application of the subject lot and provides the following:

The applicant's intention is to create an industrial park consisting of fifty-one (51) lots ranging from 1,858 to 7,433 square meters in size with one (1) lot designated as a ponding basin. The applicant, developer, and owner-interest of Lot 5315 propose to incorporate full improvement of infrastructure pursuant to the subdivision law. The application provides for all necessary information as required per Title 21GCA, Ch. 62, Section 62401, *Form of Tentative Plans*. The applicant intends to install adequately designed and sized infrastructure for water, power, public sewer, and road.

The request to subject the property to an industrial park subdivision is unconventional, yet viable due to the surrounding zoning overlay as provided by the Dos Amantes Planning Area and its close proximity to areas identified for immediately anticipated buildup for the military. The applicant insists the subdivision will serve to fill an immediate need to provide industrial land resources.

¹ Public Law 30-211 – An Act to approve Official Zoning Map F3 67S 52, the Dos Amantes Planning Area and all related zoning amendment. Signed into law and promulgated on December 2010.

Continuation of Memorandum
RE: Staff Report - Application No. 2015-26 – Tentative Subdivision
Lot 5315, Municipality of Dededo
September 15, 2015
Page 3 of 4

To accomplish this the applicant proposes to insert development controls to include a declaration of covenants, conditions, and restrictions or CCRs that will insure land uses within the subdivision will be restricted to and for industrial use.

The master plan of Ukudu remains limited to the approved Official Zoning Map best known as the Dos Amantes Planning Area. Development in the area is limited to the former Younex Workforce housing facility and the Guam Regional Medical Center. Nonetheless, the Dos Amantes Planning Area remains an open canvas whose development opportunities are only restricted to permitted or conditioned uses within commercial, light industrial, and/or Hotel-Resort development.

With respect to position and recommendation of the Application Review Committee, the Bureau of Statistics & Plans (BSP) and the Department of Public Works (DPW) provide interesting recommendations:

- a. BSP is of the opinion that the proposed ponding basin as depicted in application may not be adequately sized to accommodate the entire subdivision. BSP suggests alternative methods to address surface water catchment and water quality per each lot prior as a means to prevent percolation of industrial waste or materials into the northern water recharge area. We are in agreement with this recommendation.
- b. DPW suggests that the entrance leading from FAA road and onto the subdivision be expanded from 40 feet to 44 feet as shown throughout internal roadways of the subdivision. We agree with this proposal as well for reasons concerning safe egress/ingress and consistency, however, we remain empathetic to the challenge of designing an easement for connectivity between the subdivision and FAA Road due to the offset alignment of FAA road and the limited land space available to accommodate access.
- 5. **RECOMMENDATION:** Based on the submitted application and supporting information, the applicants continuing efforts to work with the various government entities, and the responses from members of the ARC, we recommend **APPROVAL** upon the condition that the applicant take into account and adhere to the ARC conditions and requirements as stipulated on their official Position Statements, specifically addressing:
 - **a.** The applicant must work with the Department of Public Works to provide adequate road widths to facilitate safe and efficient ingress/egress to and from the subdivision. Such coordination must be include input from the Guam Chief Planner;

Continuation of Memorandum
RE: Staff Report - Application No. 2015-26 – Tentative Subdivision
Lot 5315, Municipality of Dededo
September 15, 2015
Page 4 of 4

- b. The applicant shall provide adequate full improvement infrastructure to address intended use and operational needs of an industrial park subdivision. This shall be vetted and approved by pertinent government entities and as required pursuant to Title 21GCA, Chapter 62, Section 62401 at the time of approval of this request and Title 21GCA, Chapter 62, Section 62402 at the time the applicant period a request for approval of a final subdivision;
- c. That any activity associated with the sale, lease, rent, or any form of alienation to include securing reservation for lease or sale of the subdivision or individual lots thereof, shall not be permitted until document instrument(s) containing Covenants, Conditions, and Restrictions (CCRs) as proposed by the applicant are in place insure the proposed subdivision will be used strictly for light industrial use. Such CCRs shall be reviewed and approved by the Guam Chief Planner and Chairman of the Guam Land Use Commission, and recorded at the Department of Land Management;
- d. Plans prepared for final subdivision approval shall contain elements of surface water runoff containment as recommended by the Bureau of Statistics & Plans. The applicant and/or his agent responsible for site development must coordinate and consult with BSP on designs to achieve surface and storm water containment and the removal and/or discharge of such material with means to insure water quality thresholds are achieved prior to discharge. The applicant must also work with the Guam Environmental Protection Agency with respect to insuring said techniques or methodology for surface water runoff containment and water quality protection standards remain consistent will applicable regulatory requirements; and
- e. This tentative subdivision plan shall be reviewed and approved by the Survey Division of the Department of Land Management within a time line appropriate to allow for due diligence review pursuant to Title 21GCA Chapter 60, Articles 5 through 8 prior to submitting a request for approval for a final subdivision plan.

MARVIN Q. AGUILAR

Case Planner: JPB ents: ARC Memo to GLUC Member

Attachments:

Street Address: 590 S. Marine Corps Drive Suite 733 ITC Building Tamuning, GU 96913

> Mailing Address: P.O. Box 2950 Hagåtña, GU 96932

Website: http://dlm.guam.gov

E-mail Address: dlmdir@dlm.guam.gov

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DIPÅTTAMENTON MINANEHAN TÅNO'

(Department of Land Management) **GUBETNAMENTON GUÅHAN**(Government of Guam)



MICHAEL J.B. BORJA Director

EDDIE BAZA CALVO Governor

RAY TENORIO

September 15, 2015

Memorandum

To: Guam Land Use Commission (GLUC) Members

From: Chairman, Application Review Committee (ARC)

Subject: Summary of Positions Submitted by ARC

Re: Application No. 2015-26 (Tentative Subdivision)

Listed below is the compilation of Positions taken by the various ARC member agencies as submitted to Planning Division, Department of Land Management. The conditions as imposed by the ARC member agencies are listed when applicable.

DEPARTMENT OF LAND MANAGEMENT (DLM):

DLM recommends approval with the following conditions:

- The applicant adheres to the ARC conditions and requirements as stipulated on their official Position Statements.
- In line with the position statement submitted by the Department of Public Works, and in accordance with Section 3219, Title 18 of Guam Rules & Regulations (GARR), we recommend that, at a minimum, the applicant increase the width of the proposed easement granting access to the subdivision from 40 to 44ft., if not even wider up to 60ft.

However, perhaps a re-design of this entrance road, with respect to the width and angle coming off the 100ft. "Parcel L" easement would be even more beneficial in allowing for adequate and safe ingress/egress from the development. As it is currently designed, a 0.33 acre lot of irregular shape (Lot 5313-7-1 as shown on the Tentative Subdivision Plan) - comparatively small compared to the 51 proposed lots - will be created as a result of the severance of the 40ft. right-of-way. With a change in design, this lot could be eliminated and the excess square footage be applied to Lot 5313-7-R2.

 Additionally, in line with the position statement provided by GPA, we would like to recommend that the applicant consider adding to the proposed setback from the existing bullcart trail from 20 to 25ft. to provide adequate potential ingress/egress to and from lots fronting this trail, should it become a road in the future and the individual property owners decide to locate parking in the areas of their lots adjacent to it. Memo to GLUC Members Ref: ARC Position Statements - Application No. 2015-26 Page 2 of 4

GUAM ECONOMIC DEVELOPMENT & COMMERCE AUTHORITY (GEDCA): GEDCA has no objections.

DEPARTMENT OF PARKS AND RECREATION (DPR):

DPR has reviewed the above application and has determined that the tentative subdivision will not affect historic properties within the subject lot and, therefore, has no objection to the approval of this application and will work with the applicant to comply with historic preservation requirements during the permitting process for the clearing/construction phase of the proposed Pacific Industrial Park.

DEPARTMENT OF PUBLIC WORKS (DPW):

DPW has completed its review of the subject application and has no objection to the applicant's requests provided the following conditions be in place:

The applicant shall:

- To comply with all the geotechnical requirements related to site preparation
- To meet the adequate egress/ingress and must revise the existing 40ft. to 44ft. fronting Rt. 3 and to be coordinated with the Division of Highways (Rights of Way section); and
- The existing 20ft, setback from the bullcart trail must be adjusted to 25ft.

GUAM POWER AUTHORITY (GPA):

GPA suggests that the improvements, at a minimum of street grading and surfacing, shall extend to the PAUE 20/R/W along the South and East boundary of Tract 11407.

- 1. Applicant is required to comply with the following pursuant to the National Electric Code, National Electric Safety Code and GPA's Service Rules and Regulations:
 - Coordinate overhead/underground power requirements with GPA Engineering for new structures.
 - Maintain minimum clearances as defined by the current edition of the National Electrical Safety Code and National Electrical Code.
 - Maintain adequate clearance between any structures and electric utility easements in accordance with NESC and GPA requirements.
 - Developer/Owner shall provide necessary electric utility easements to GPA prior to final connection.
 - Provide scheduling and magnitude of project power demand requirements for new loads
 - All relocation costs for GPA's facilities, if necessary, is 100% chargeable to the applicant including but not limited to labor and materials.
- 2. Primary distribution overhead and underground line extensions and GPA service connections must adhere to the guidelines outlined in the current issue of GPA's Service Rules and Regulations.
- 3. A system impact assessment may be required to determine the effect of this facility on GPA's existing power facilities.

Memo to GLUC Members Ref: ARC Position Statements - Application No. 2015-26 Page 3 of 4

4. All costs associated with the modification of GPA facilities shall be chargeable to the customer. This includes relocation costs, new installation costs and any required system upgrades.

BUREAU OF STATISTICS AND PLANS (BSP):

The applicants are advised to address the following issues and adhere to the conditions prior to approval, should the Commission decide to approve the tentative subdivision request.

Water Source Protection from Industrial Waste

The Bureau is concerned that the activities from the proposed industrial activities would have adverse effects to Guam's sole source aquifer; therefore, we encourage the applicant to consult with Guam EPA to incorporate practices into their infrastructure improvement plan for managing industrial waste, waste disposal, and integrating pollution prevention methods to avoid potential contamination of Guam's aquifer.

Stormwater Management

The project site plan proposes a ponding basin on Lot 1, Block 1 within the subdivision. With the intent of this basin to capture stormwater and contaminated runoff generated from industrial activities, it is highly unlikely that the ponding basin is sufficient to accommodate runoff volume from 36.7 acres. Furthermore, the ponding basin does not filter or treat pollutants before water reenters the ground. Therefore, we highly recommend that the applicants incorporate stormwater facilities inclusive of multi-cell ponding basins, bioretention systems, and bioswales into their site design as an infrastructure improvement.

The Bureau advised the applicant to consult with Guam EPA in incorporating appropriate stormwater methods to address industrial waste into their infrastructure site improvement plan among the subdivided lots.

Low Impact Development

The applicant is encouraged to incorporate low impact development practices such as permeable parking and walkways, grassed swales or rain gardens into their site plan as a means to reduce runoff and control erosion from their property in addition to aesthetic purposes.

Erosion

The Bureau recommends potential owners of the subdivided lots to prevent adverse impacts from construction site runoff by installing perimeter sediment controls to retain or filter concentrated runoff from disturbed areas to trap or retrain sediment before it leaves a construction site. Additionally, future owners are advised to consult with Guam EPA fro effective implementation of erosion control methods and ensure that best management practices are maintained both during construction and throughout the life of the industrial facility.

Memo to GLUC Members Ref: ARC Position Statements - Application No. 2015-26 Page 4 of 4

Other Environmental Impacts

Other potential environmental concerns include air pollution (including odors) from the releases of refrigerants, solvents, LPG and exhaust emission; air pollution caused by tampering with vehicle emission or anti-pollution controls and exhaust systems; and noise impacting neighbors. The applicants are advised to consider these impacts in their proposed plan and to consult with Guam EPA to incorporate best management practices for future site developments.

GUAM ENVIRONMENTAL PROTECTION AGENCY (GEPA):

Has not submitted Position Statement as of Staff Report date.

GUAM WATERWORKS AUTHORITY (GWA):

Has not submitted Position Statement as of Staff Report date.

GUAM FIRE DEPARTMENT (GFD):

Has not submitted Position Statement as of Staff Report date.

DEPARTMENT OF AGRICULTURE (DoAg):

Has not submitted Position Statement as of Staff Report date.

DEPARTMENT OF CHAMORRO AFFAIRS (DoCA):

Has not submitted Position Statement as of Staff Report date.

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES (DPH&SS):

Has not submitted Position Statement as of Staff Report date.

GUAM PUBLIC SCHOOL SYSTEM (GPSS):

Has not submitted Position Statement as of Staff Report date.

Marvin Q. Aguilar Guam-Chief Planner

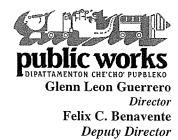
Attachments: ARC Position statements CC: Executive Secretary, GLUC



The Honorable Eddie Baza Calvo Governor

The Honorable
Ray Tenorio
Lieutenant Governor





September 9, 2015

MEMORANDUM

TO:

Director, Department of Land Management

FROM:

Director

APPLICATION:

2015-26

APPLICANT(s)

Deepak and Kiran Sadwani

SUBJECT:

Tentative Subdivision on Lot 5315, Proposed Pacific Industrial

in an "M-1" Zone, Dededo

Buenas Yan Hafa Adai!

The applicants, are requesting for the approval for the above subject development of an industrial park for warehousing and other uses in an "M-1" zone area. The project proposes to create 51 lots with minimum 0.5 acres and Lot No.1 is designated for the ponding basin. The property is 36.7 acres or 148,810 square meters and is within the Municipality of Dededo.

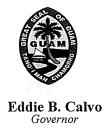
The Department of Public Works (DPW) has completed its review of the subject application and has no objection to the requests provided the following conditions be in place:

- to comply with all the geotechnical requirements related to site preparations;
- to meet the adequate egress/ ingress and must revise the existing 40 ft. to 44 ft. fronting Route 3 and to be coordinated with the Division of Highways (Rights of Way Section); and
- the existing 20 feet setback from the bullcart trail must be adjusted to 25 feet.

DPW recommends approval, subject to the comments reviewed by the Application Review Committee (ARC) with conditions that the complete set of design drawings must meet all the requirements in conformance with the latest building code prior to issuance of building permit.

If you have any questions, please call Mr. John F. Calanayan, Acting Engineer in Charge or Maryrose M. Wilson, Engineer III in the Division of Capital Improvement Projects (CIP) at 646-3189/3224.

Dangkulu na Si Yu'os Ma'ase!



Department of Parks and Recreation Government of Guam

490 Chalan Palasyo Agana Heights, Guam 96910 Director's Office: (671) 475-6296/7 Facsimile: (671) 477-0997

Parks Division: (671) 475-6288/9 Guam Historic Resources Division: (671) 475-6294/5 Facsimile: (671) 477-2822



William N. Reyes
Deputy Director

Ray Tenorio
Lt. Governor

In reply refer to: RC2015-0851

September 9, 2015

Memorandum

To: Executive Secretary, Guam Land Use Commission

From: Director, Department of Parks and Recreation

Subject: DLM Application No.: 2015-26, Tentative Subdivision

Lot 5315, Ukudo, Dededo, Municipality of Dededo

Applicant: Deepak and Kiran Sadhwani Represented by: FC Benavente, Planners

We reviewed the above subject and determined that the Tentative Subdivision will not affect historic properties within the subject lot. Therefore, we have no objection to the approval of this Tentative Subdivision Application.

However, during the permitting process for the clearing/construction phase of the Proposed Pacific Industrial Park, our office will work with the applicant to comply with historic preservation requirements.

Should you have any questions, please do not hesitate to call us.

Raymond F.Y. Blas

Eddie Baza Calvo Governor of Guam



Government of Guam P.O. Box 2950 Hagåtña, Guam 96932 Tel: (671) 472-4201/3 Fax: (671) 477-1812



William M. Castro Director James T. McDonald Deputy Director

Ray Tenorio Lieutenant Governor

MEMORANDUM

To:

Chairman, Guam Land Use Commission

Via:

Executive Secretary, Department of Land Management

From:

Director, Bureau of Statistics and Plans

Subject:

Position Statement on Application No. 2014-33

Applicant: Deepak and Kiran Sadhwani

Location: Lot 5315; Dededo

Proposed use: Tentative Subdivision for Industrial Park

The applicants, Deepak and Kiran Sadhwani, represented by consultant Richard Sana of FC Benavente Planners are requesting for a tentative subdivision approval on Lot 5315 located in Dededo. The applicants propose to develop their 36.7 acre lot to an industrial park for warehousing and other uses permitted in an "M-1" zone. The project proposes to create 51 lots with a minimum size of 0.5 acres to 1.5 acres and designates one of the lots as a ponding basin. The project also proposes infrastructure improvements inclusive of a sewer lift station, sewer line, water line, electricity, and a 44-feet wide paved interior utility easement and right of way.

The Bureau of Statistics and Plans (Bureau) has completed its review of the attached application and provides the following comments. Should the Commission decide to approve the tentative subdivision request, the applicants are advised to address the following issues and adhere to the conditions prior to approval.

Water Source Protection from Industrial Waste. The applicant's Dededo property is located in the Northern Watershed, which is home to the Northern Guam Lens Aquifer (NGLA). The aquifer is an essential resource for Guam and is the primary source of drinking water for eighty percent of the island population. Moreover, the U.S. Environmental Protection Agency has designated the NGLA a sole source aquifer for Guam's drinking water. Therefore, it is of paramount importance to ARC Application 2015-26 Deepak & Kiran Sadhwani Page 2 of 4

prevent sources of contamination from entering Guam's water supply. The primary goal for protecting the aquifer is to safeguard human health and the environment by maintaining water quality for continued use.

The Bureau is concerned that the activities from the proposed industrial activities would have adverse effects to Guam's sole source aquifer; therefore, we encourage the applicant to consult with Guam Environmental Protection Agency (Guam EPA) to incorporate practices into their infrastructure improvement plan for managing industrial waste, waste disposal, and integrating pollution prevention methods to avoid potential contamination of Guam's aquifer. By reducing the amount of contaminants released into the environment and the volume of waste requiring disposal, pollution prevention activities protect human health and the environment. We refer the applicants to the U.S. Environmental Protection Agency's Guide in Industrial Management, which can be found at their website below.

http://www.epa.gov/wastes/nonhaz/industrial/guide/index.htm

Stormwater Management. The project site plan proposes a ponding basin on Lot 1, Block 1 within the subdivision. With the intent of this basin to capture stormwater and contaminated runoff generated from industrial activities, it is highly unlikely that the ponding basin is sufficient to accommodate runoff volume from 36.7 acres. Furthermore, the ponding basin does not filter or treat pollutants before water reenters the ground. Therefore, we highly recommend that the applicants incorporate stormwater facilities inclusive of multi-cell ponding basins, bioretention systems, and bioswales into their site design as an infrastructure improvement.

As industrial activities produce high concentrations of pollutants, the Bureau is concerned that activities generated from future industrial facilities may severely impair the water quality of Guam's sole-source aquifer if stormwater runoff is not treated. Hazardous substances and liquid waste entering the groundwater may be caused by spills of liquids such as oil, coolant, paints, solvents and other industrial chemicals.

According to the CNMI Guam Stormwater Management Manual, Ch. 2 Stormwater Treatment Practice Criteria and Standards:

1. "...stormwater runoff from hotspots cannot be allowed to infiltrate into groundwater without prior water quality treatment."

2. "...a greater level of stormwater treatment is needed at hotspot sites to prevent pollutant washoff after construction. This will involve preparing and implementing a stormwater pollution prevention plan (SWPPP) that involves a series of operational practices at the site that reduce the generation of pollutants from a site or prevent contact of rainfall with the pollutants."

The manual further identifies industrial sites as a stormwater hotspot in which the land use or activities generate higher concentrations of hydrocarbons, trace metals or toxins than are found in typical stormwater runoff, based on monitoring studies.

The Bureau advises the applicant to consult with Guam EPA in incorporating appropriate stormwater methods to address industrial waste into their infrastructure site improvement plan among the subdivided lots.

Low Impact Development. Impervious surfaces from parking stalls, driveways, and rooftops accelerate stormwater runoff. The applicant is encouraged to incorporate low impact development practices such as permeable parking and walkways, grassed swales or rain gardens into their site plan as a means to reduce runoff and control erosion from their property in addition to aesthetic purposes. One such practice could be incorporating a rain garden in the landscaping design that will capture runoff from roofs, parking lots, or driveways, which filters pollutants before entering the aquifer. These approaches will add great benefits such as low maintenance, stormwater management, aquifer recharge, beautification, and neighborhood collaboration and pride in accordance to the North and Central Guam Land Use Plan. A guidebook "Island Stormwater Practice Design Specifications" is available at the Bureau of Statistics and Plans, Guam Coastal Management Program office.

Erosion. Controlling erosion and sediment flow from construction sites are a priority with regard to stormwater impacts to receiving water bodies within the project site, which includes Guam's sole source aquifer.

The Bureau recommends potential owners of the subdivided lots to prevent adverse impacts from construction site runoff by installing perimeter sediment controls to retain or filter concentrated runoff from disturbed areas to trap or retain sediment before it leaves a construction site. Additional methods are listed in the CNMI Guam Stormwater ARC Application 2015-26 Deepak & Kiran Sadhwani Page 4 of 4

Management Manual, which can be obtained at Guam EPA or the Bureau.

Additionally, future owners are advised to consult with Guam EPA for effective implementation of erosion control methods and ensure that best management practices are maintained both during construction and throughout the life of the industrial facility.

Other Environmental Impacts. Other potential environmental concerns include air pollution (including odors) from the releases of refrigerants, solvents, LPG and exhaust emission; air pollution caused by tampering with vehicle emission or anti-pollution controls and exhaust systems; and noise impacting neighbors. The applicants are advised to consider these impacts in their proposed plan and to consult with Guam EPA to incorporate best management practices for future site developments.

In conclusion, the Bureau finds that industrial activities of the proposed subdivision may adversely affect Guam's sole source aquifer. Therefore, should this application be approved, the Bureau recommends that the applicants, Deepak and Kiran Sadhwani comply with the above listed recommendations.

As government officials, it is our primary responsibility to ensure that the future construction and operations of this proposed endeavor are in a manner designed to protect the public health, safety, and to promote the public welfare and convenience. We also encourage the applicants to protect Guam's natural resources for future generations and ensure they are used in a sustainable manner.

WILLIAM M. CASPRO

cc: GEPA DPW



GUAM POWER AUTHORITY

ATURIDAT ILEKTRESEDAT GUAHAN P.O.BOX 2977 • AGANA, GUAM U.S.A. 96932-2977

August 25, 2015

MEMORANDUM

To:

Chairman, Guam Land Use Commission

Executive Secretary, Guam Land Use Commission

From:

General Manager

Subject:

Lot Tract 11407 (Formerly Lot 5315), Municipality of Dededo, (Deepak and

Kiran Sadhwani); Tentative Subdivision Application for Development of an

Industrial Park. Application No. 2015-26

Guam Power Authority has reviewed the application described above and submits the following position statement:

The applicants have presented Tract 11407 (formerly Lot 5315) for a tentative subdivision with plans to develop an Industrial Park in an M-1 zone. During the ARC meeting on August 20, 2015, it was mentioned that road and utilities improvements will be limited to the Public Access and Utility Easement (PAUE) 44'R/W fronting the lots and will not extend to the PAUE 20'R/W to the South and East of Tract 11407.

Pursuant to 21 GCA, Ch. 62, §62108, the Subdivider shall provide for the installation of roads within the subdivision. The PAUE 20'R/W to the South and East of Tract 11407 are integral parts of the subdivision and require road improvements in accordance with 21 GCA§62108. The road improvement to the South and East of Tract 11407 within the 20'R/W is essential for utilities maintenance and access and for emergency vehicles for this Industrial Park.

Consequently, GPA suggests that the improvements, at a minimum of street grading and surfacing, shall extend to the PAUE 20 R/W along the South and East boundary of Tract 11407 as shown on the attached sketch.

A. Comments and Recommendations Concerning GPA requirements:

- 1. Applicant is required to comply with the following pursuant to the National Electric Code, National Electric Safety Code and GPA's Service Rules and Regulations:
 - Coordinate overhead/underground power requirements with GPA Engineering for new structures.
 - Maintain minimum clearances as defined by the current edition of the National Electrical Safety Code and National Electrical Code.
 - Maintain adequate clearance between any structures and electric utility easements in accordance with NESC and GPA requirements.
 - Developer/Owner shall provide necessary electric utility easements to GPA prior to final connection.
 - Provide scheduling and magnitude of project power demand requirements for new loads.

fr

ASG/arp

- All relocation costs for GPA's facilities, if necessary, is 100% chargeable to the applicant including but not limited to labor and materials.
- 2. Primary distribution overhead and underground line extensions and GPA service connections must adhere to the guidelines outlined in the current issue of GPA's Service Rules and Regulations.
- 3. A system impact assessment may be required to determine the effect of this facility on GPA's existing power facilities.
- 4. All costs associated with the modification of GPA facilities shall be chargeable to the customer. This includes relocation costs, new installation costs and any required system upgrades.

JOHNM. BENAVENTE, P.E.

Thank you for the opportunity to review this application.

INFRASTRUCTURE CERTIFICATION FORM

Agency Certifying: **Guam Power Authority** Applicant: Deepak and Kiran Sadhwani

Location: Lot Tract 11407 (Formerly Lot 5315), Dededo

Type of Application: Tentative Subdivision GLUC/GSPC Application No. 2015-26

Brief Project Description:

Development of an Industrial Park.

For the purposes of this Certification, GOVERNMENT SERVICES, FACILITIES, and INFRASTRUCTURE include, but are not limited to: power lines poles and facilities; water lines, pumps and facilities; sewer and liquid waste disposal; storm water disposal; solid waste disposal; telephone lines and facilities; schools; health facilities; police and fire fighting service and facilities; roads; traffic and street lights; parks and recreational activities.

1.	· · · · · · · · · · · · · · · · · · ·	ERNMENT SERVICES, FACILITIES and VAILABLE AND IN PLACE to support this
	Yes	No 🖂
2.	If the answer to #1 above is YES, then I hereby certify that the required GOV INFRASTRUCTURE are currently Al	TERNMENT SERVICES, FACILITIES and
	Yes	No 🖾
3	If the required GOVERNMENT SERV	VICES FACILITIES and INFRACTRICTION

3. If the required GOVERNMENT SERVICES, FACILITIES and INFRASTRUCTURE currently in place are **NOT AVAILABLE** or they are **AVAILABLE**, **BUT NOT ADEQUATE**, itemize the services, facilities and infrastructure that are needed, the estimated cost thereof and whether funds are currently available and identified to develop such services, facilities and infrastructure:

Services, Facilities and	Cost of	Funds	Date Available	Funds
Infrastructure Needed	Upgrades	Available		Identified
Please see comments below				

I hereby certify that the foregoing is true and correct to the best of my knowledge.

JOHN M. BENAVENTE, P.E.

General Manager

Comments:

Based on a preliminary inspection of the site, the electrical facilities <u>will</u> require upgrading to meet the demand of the proposed project. A system impact assessment may be required to determine the effect of this facility on GPA's existing power distribution system. The applicant will be responsible for the cost of any required system upgrade.

ASG/arp





RECEIVED

Revo by email
9/10/18015

GUAM WATER ORKS UTHORITY

Gloria B. Nelson Public Service Building 688 Route 15, Mangilao, Guam 96913

MEMORANDUM

September 18, 2015

Director, Department of Land Management TO:

Mark Miller, Interim General Manager FROM:

SUBJECT: Position Statement on Application No. 2015-26

Lot 5315, Municipality of Dededo

Request for a Tentative Subdivision for a Proposed Industrial

Park in a M1 Zone

APPLICANTS: Deepak and Kiran Sadhwani

The Guam Waterworks Authority (GWA) has reviewed the referenced application and the revised documents provided on September 3, 2015. This memorandum shall serve as GWA's position statement for the referenced application.

This position statement shall not be construed as notice that water and sewer systems have the capability to accommodate the proposed development, including fire flow, without on-site or off-site improvements. Any extension of the water and sewer systems and/or capacity upgrades required to serve the property shall be subject to GWA rules and regulations. Any required utility extensions of existing facilities to serve the subject property shall be at the applicant's expense.

- 1. GWA recommends that project consultants coordinate with the GWA Engineering Department well in advance of building permit application submittal to GWA. Discussions shall include the proposed project's impacts on existing water and sewer infrastructure and any required infrastructure improvements. Note that infrastructure impacts are typically determined based on land use. However, specific activities and water demands for the proposed industrial park are not known.
- 2. Revised water demand calculations estimated a maximum daily demand of 610,470 gallons per day (gpd), not inclusive of fire flow requirements.

Page 2
GWA Position Statement
ARC Application No. 2015-26

Applicants: Deepak and Kiran Sadhwani

Maximum wastewater production was estimated at 15,000 gpd. Sewage production is typically eighty percent of water use. Calculations should account for the discrepancy between water demand and sewage production.

- 3. The proposed water transmission system design includes two dead-ends. Because specific activities and water demands for individual lots are not known, there is concern that lots located near dead-ends might not receive water pressure meeting GWA's regulatory standards. The water system design may need to be revised to ensure that lots at the ends of the streets will receive sufficient water pressure and that Fire Department fire flow requirements will be met. Design revisions might include connecting the water mains at the end of the streets to create a looped system and/or providing a second connection to the Route 3 water main.
- 4. The proposed water transmission system identifies a connection to an existing water main that was constructed by a private entity. Therefore, entities connecting to the existing water main may be required to provide a refund for construction costs, per Title 28 Guam Administrative Rules and Regulations, Section 2118(c). GWA is researching this matter.
- 5. A request for GWA to assume ownership of privately-constructed water and sewer infrastructure facilities does not automatically constitute acceptance on GWA's part. The request will be subject to GWA review and approval. One consideration for accepting privately-constructed utilities is the systems' ab'lity to accommodate future connections. In addition, utilities are to be located in an easement or right-of-way, so that GWA may legally access ut'lities. The sewer pipe between sewer manholes 6 and 7 appears to encroach upon Lot 19 Block 3.
- 6. All water and sewer infrastructure facilities to be installed by the developer will require prior approval from, and shall be subject to inspection by, GWA. Certain activities may require wastewater pretreatment, such as an oil/water separator. Backflow preventers are required for non-residential activities.

This GWA Position Statement shall remain valid for 365 calendar days from the date of this response. Please contact the GWA Engineering Division regarding water and sewer system improvement design and construction standards and procedures. For additional information please contact Mr. Mark Miller, Interim General Manager, at 300-6845.



1973

ENVIRONMENTAL PROTECTION AGENCY

Ahensian Pruteksion Lina'la Guahan

EDDIE BAZA CALVO GOVERNOR OF GUAM RAY TENORIO LT. GOVERNOR OF GUAM ERIC M. PALACIOS ADMINISTRATOR

YVETTE CRUZ
DEPUTY ADMINISTRATOR

P.O. BOX 22439 BARRIGADA, GU 96921

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RECEIVE

MEMORANDUM

SEP 24 2015

To:

Chairman, Guam Land Use Commission

Via:

Executive Secretary, Department of Land Management

From:

Administrator, Guam Environmental Protection Agency

Reference:

Tentative Subdivision Application on Lot 5315, Dededo, Guam

Proposed Pacific Industrial Park, Applicant – Deepak and Kiran Sadhwani

Application No. 2015-26

Buenas yan Hafa Adai,

This Agency has no objection with the proposed Sub-division of Lot 5315 however, we have concern with the full development of the property due to limited water supply, wastewater treatment and its conveyance serving the subject property and other environmental issues. This Agency recommends that Low Impact Development (LID) Practices to Mimic Natural Conditions be applied to this development.

The following are GEPA's concern with the proposed development:

- I. Wastewater Treatment System.
 - 1. The Northern District Wastewater Treatment Plant is continuously in violation with the Clean Water Act for not meeting the Water Quality Standard imposed under the NPDES permit. Wastewter from this project will be diverted to this wastewater plant.
 - 2. The main wastewater pump station (Southern Link) and its associated appurtenances and conveyance are undersized and it overflow raw sewage to the ground during peak demand and/or high infiltration in the collection system.
 - 3. The proposed upgrade to bring the treatment plant to a secondary wastewater treatment system has not yet materialized and no tentative schedule to this date.
 - 4. The collection system serving the area is an aging pipes and must be evaluated or assessed for its integrity to avoid potential leaks of raw sewage to the ground.
- II. Potable Water Supply.
 - 1. The water source serving the area are currently serving Tamuning, Tumon and other industrial and commercial establishment within the Upper Tumon area

Todo Y Nilala Y Tano Man Uno ~ All Living Things Of the Earth Are One

- including the Ukudo school, New hospital and the Coretech industrial park
- 2. The light industrial (M-1) zone with warehouse building, requires an adequate Fire Flow demand in addition to the domestic and industrial water demands.
- 3. The existing water distribution serving the property is not adequate to meet the required fire flow and domestic water demand, it may require an onsite water storage tank and associated water distribution system.
- 4. Water source (production wells) currently providing water to the service area and other development within the Route3 industrial development may not be adequate considering the volume of projects being plan in preparation with the upcoming military build-up. Developer must coordinate with GWA to alleviate this concern with diligence and proactive approach.

III. Storm Water Management Plan.

- 1. Provide storm water ponding basin to accommodate run-off from the basic lot considering the maximum development of the sub-divided properties.
- 2. Use the 2006 CNMI and Guam Storm water Management Manual in planning the storm water run-off management plan.
- 3. There should be no storm water run-off discharges to adjoining properties.
- 4. A pre-treatment must be provided to all run-off prior to discharge to the basin.

IV. Solid Waste Disposal System and Hazardous Waste Storage.

- 1. All solid waste generated during clearing, grading and construction must be properly disposed to facilities permitted by Guam EPA.
- 2. Each facility must be provided with commercial Trash Bin accessible to Trucks or trailer for hauling.
- 3. Any chemicals stored must comply with the applicable Guam EPA regulations.

This agency support the development and the construction of establishments and facilities within the subject property in anticipation of the upcoming military build-up.

Should you have questions or need additional information please contact Mr. Angel Marquez, Acting Chief Engineer at (671) 300-4796 or email at angel.marquez@epa.guam.gov.

Dankulo na Si Yu'os Ma'ase,



Tel/Fax: (671) 647-2114 Cell: (671) 888-0961 eMail: nlamarassociates@gmail.com

PROJECT: Pacific Industrial Park
Off Route 3, NCS, Dededo

DESIGN OF WATER DISTRIBUTION MAIN

A. References:

- A.1 Water Supply and Sewerage, 6th Edition by Terrence McGhee
- A.2 Volume 2, Water Resources Master Plan 2006
- A.3 Uniform Plumbing Code, 2012
- A.4 Rules and Regulations for Water and Sewer Services, PUAG 1994

Assumptions:

The 37.84 acre lot is subdivided into 50 lots with areas ranging from ½ acre to 2 acre lots. As an industrial subdivision, contractors and suppliers are the target clients of the Owner. The following is the assumption used on this design, as follows:

50 Lots - All of these lots ranging from ½ acre size to 2 acre size are intended to be used as office and warehouse for storage purposes only. No workers barracks are intended to be constructed in any of the 50 lots.

B. Determine Number of Building Occupants and Frequency of Consumptions

<u>Group</u>	No. of Persons	Frequency	Water Consumption (gal/day, gpd)
Personnel/Workers			(8 3) 51
Manager/Owner	1	6x per week	1x125x50 = 6,250
Secretary	1	5x per week	1x125x50 = 6,250
 Accounting Clerk 	1	5 x per week	1x125x50 = 6,250
Warehouse staff	5	6x per week	5x125x50 = 31,250
		Total	50,000

- C. Compute Water Consumption per Day
- C1. Consumption per Day based on number of occupants, Q1

Given: Consumption = 125 gal per capita per day (gpcd) (Par 3.5 Vol 2 Chapte Maximum Daily Demand = 1.8 x average

Fire Flow, Use minimum requirements of 1,500 gal/min., maintained for 10 hours Note: Fire Flow requirement given by Guam Fire Department at DPW Permit Genter

24 Sept 2015

Average Domestic Demand (gpd) = 50,000 gpd

Maximum Daily Demand = 1.8 x average consumption

 $= 1.8 \times 50,000$

= 90,000 gpd

Required Fire Flow = 1,500 gal/min

= 2,160,000 gpd x (10/24)

= 900,000 gpd

Total Flow Required, Q1 = 90,000 + 900,000

Q1 = 990,000 gpd

C2. Consumption based on industry-specific use, Q2 Equivalent to a high density residential zone placed at average water consumption of 21,000 gal/acre-day. Acre as mentioned here applies to land area actually covered by structures excluding parking lots and grass areas.

Computed covered land area:

Area1 (1/2 acre lots), Area = 8.74 acres Area2 (> 1/2 acre lots), Area = 7.41 acres

Average Domestic Demand (gpd) = $21,000 \times (8.74 + 7.41)$

= 339,150 gpd

Maximum Daily Demand = $1.8 \times (339,150)$

= 610,470 gpd

Required Fire Flow = 1,500 gal/min

= 2,160,000 gpd x (10/24)

= 900,000 gpd

Total Flow Required, Q2 = 610,470 + 900,000

Q2 = 1,510,470 gpd

$$Q2 > Q1$$
, Use $Q2 = 1,510,470 \text{ gpd}$

D. Sizing Water Distribution Line

$$Q = AV$$
 where: $Q = Flow$, cubic feet per second (cfs)

$$A = Area in square feet (ft^2)$$

Given: V= 6 fps (Sub Par 8.3.1.2 Vol 2 Chapter 8 WRMP)

Compute Q =
$$\frac{1,510,470 \text{ gpd}}{7.48 \text{ gal/ft3} \times 86,400 \text{ sec per day}}$$
 = 2.34 cfs

A (inside diameter) =
$$2.34 \text{ cfs}$$
 = 0.39 ft²

$$A = \frac{\pi \times D^2}{4}$$

D =
$$\sqrt{\frac{(A \times 4)}{\pi}}$$
 = $\sqrt{\frac{(0.39 \times 4)}{\pi}}$ = 0.7047 ft. = 8.46 inches

Recommend to use 8" dia pipe



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PROJECT: Pacific Industrial Park Off Route 3, NCS, Dededo

DESIGN OF SANITARY SEWER LINE

A. References:

- A.1 Water Supply and Sewerage, Sixth Edition by Terrence McGhee
- A.2 Individual Wastewater System Regulations, Guam EPA 1984
- A.3 Uniform Plumbing Code 2012
- A.4 State of Florida Plumbing Code 2007

Assumptions:

The 37.84 acre lot is subdivided into 50 lots with areas ranging from ½ acre to 2 acre lots. As an industrial subdivision, contractors and suppliers are the target clients of the Owner. The following is the assumption used on this design, as follows:

50 Lots - All of these lots ranging from ½ acre size to 2 acre size are intended to be used as office and warehouse for storage purposes only. No workers barracks are intended to be constructed in any of the 50 lots.

B. Compute Total Sewage Flow

Group	No. of Persons	Gallons of Sewage /Person/Day
1. Office and Admin Building		40
Manager/Owner	1	18
Secretary	1	18
 Accounting Clerk 	1	18
2. Warehouse Building		

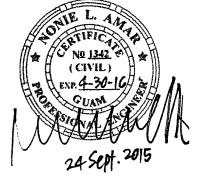
C. Compute Sewage Flow Per Day

Warehouse staff

Sewage Flow, Qd

TOTAL

Office / Admin Personnel - 3 persons x 50 @ 18 gallons/day Warehouse staff - 5 persons x 50 @ 18 gallons/day



18

Total Sewage Flow, Qd (design flow) = $(3 \times 50 \times 18) + (5 \times 50 \times 18)$

= 7,200 gpd say 8,000 gpd

It is desirable to design sanitary sewers to flow half full when at design flow. However, in this procedure, the design flow must be increased by a factor of 2.44. A sewer selected to be full at 2.44 times of the design flow will be half-full at the actual flow.

Total Flow, Qt =
$$2.44 \times Qd$$

= $2.44 \times 8,000$
= $19,520 \text{ gpd}$

Use Q of 20,000 gpd to include other incidental flow.

D. Sizing Gravity Sewer Line

$$Q = AV$$
 where: $Q = Flow$, cubic feet per second (cfs)

A = Area, square feet (ft^2)

V = Velocity, feet per second (fps)

Compute Q =
$$\frac{20,000 \text{ gallons per day}}{7.48 \text{ ga/ft}^3 \times 86,400 \text{ sec per day}} = 0.031 \text{ cfs}$$

Given:
$$Q = 0.031 \text{ cfs}$$

 $V = 2 \text{ fps (minimum)}$

$$A = Q = 0.031 \text{ cfs} = 0.016 \text{ ft}^2$$

Sizing Gravity Sewer Line

A =
$$\frac{\pi \times D^2}{4}$$

D = $\sqrt{\frac{(A \times 4)}{\pi}} = \sqrt{\frac{0.016 \times 4}{\pi}} = 0.143 \text{ ft.} = 1.72 \text{ inches, (Use 4" pipe)}$

Assume to use minimum pipe size of **4-inch** diameter. Using Manning's Equation for circular pipes flowing full, check for pipe's parameter using the attached Nomogram:

Given:
$$D = 4$$
-inch dia $V = 2$ fps

$$Q = 0.18 \text{ cfs}$$

 $S = 0.0085$

Note:

Based on the above calculations and checked with Nomogram, a 4-inch diameter sewer pipe is sufficient to convey the design flow. Other reasons that could affect the pipe's interior opening over time thus impeding the flow of sewage are the accumulation of solids, dirt, scaling, algae and other bacterial growth, where a larger pipe is desirable. However, Guam Waterworks Authority (GWA), requires a minimum of 8-inch diameter pipe to tap to an existing GWA sewer main. Therefore in consideration of the above, the following is recommended:

Recommend to use 8" diameter pipe installed at min. slope of 0.0033

E. Sizing Sewer Force Main (From Sewer Lift station to SMH-4 gravity sewer line) Compute Sewer Force Main pipe using Q = 0.18 cfs (Shown on Monogram)

$$Q = AV$$
 where: $Q = Flow$, cubic feet per second (cfs)

Given:
$$Q = 0.18$$
 cfs
 $V = 2$ fps

$$A = Q = 0.18 \text{ cfs} = 0.09 \text{ ft}^2$$

$$A = \frac{\pi \times D^2}{4}$$

D =
$$\sqrt{\frac{(A \times 4)}{\pi}}$$
 = $\sqrt{\frac{(0.09 \times 4)}{\pi}}$ = 0.338ft. = 4.06 inch (Use 4-inch dia)

Check pipes parameters using Manning's Equation as per attached Nomogram:

$$V = 2 cfs$$
 S, Slope Ratio

$$Q = 0.18 \text{ cfs}$$

$$S = 0.0085$$
 (negligible for forcemain pipes)

Recommend to use minimum of 4" diameter pipe force main

F. Sizing Required Wet Well Volume

Head as per Forcemain Layout: 37.78 Feet

Designed minimum wastewater flow: 8,000 gpd (30,283 L/day) Designed maximum wastewater flow: 20,000 gpd (75,708 L/day)

Using 4inch Submersible Wastewater Pump (WEIL Pump or Approved Equal)

Total Head: 40 Feet

Minimum run time: 1 ½ minutes

Cycle time: Maximum 10 starts per hour or every 6-minutes

$$t_r = V$$
 where: t_r = running time
 $Q_{\text{out}} - Q_{\text{in}}$ Q_{out} = wastewater flowing in
 Q_{out} = wastewater flowing out

Filling time, with the pump off, is

$$tf = \frac{V}{Q_{in}}$$

The total cycle time is therefore

$$t_c = t_r + t_f = \frac{V}{Q_{out} - Q_{in}} + \frac{V}{Q_{in}}$$

To assure a 1-1/2 minute running time:

$$V = \frac{1.5}{1440} (75,708 - 30,283) = 47.32 L$$

To assure a 6-minute cycle, consider cycle time will be the shortest, $Q_{in} = 0.5Q_{out}$.

$$6 = \frac{V}{Q_{out} - 0.5Q_{out}} + \frac{V}{0.5Q_{out}}$$

$$V = \frac{6}{1440} \times \frac{0.5 \times 75,708}{2} = 78.86 L$$

The required working volume is dictated by the cycle time and will be about 100 L or equivalent to 26.5 gallons.

Compute volume of wastewater storage required before pump will run:

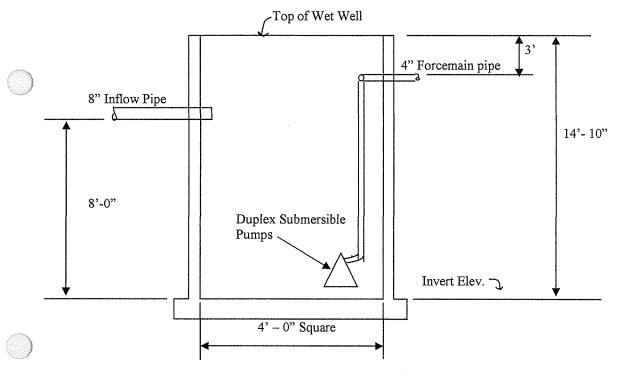
At every 6 minutes, the wastewater volume is computed at:

Volume 6 minutes = 26.5 gallons x 6 = 159 gallons

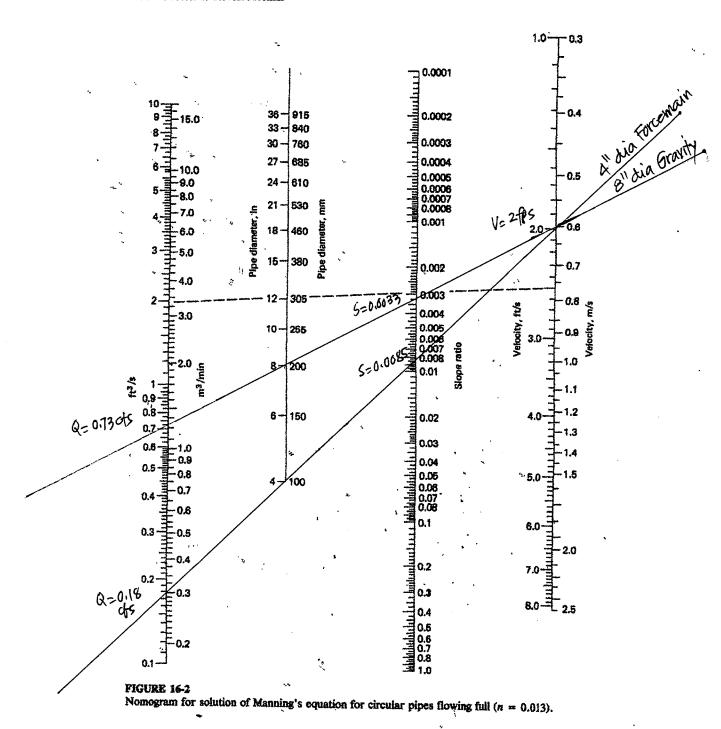
Size of wet well must be kept as small as is compatible with minimum running time and cycle time criteria in order to reduce the amount of anaerobic decay which occurs in the sump.

Assume size of wet well: 4 ft x 4 ft

At an intake velocity of 2 ft/s a submergence of about 1 foot is required.



Reinforced Concrete Wet Well



Project: PACIFIC INDUSTRIA PARK Route 3, Dededo, Guo



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Project:

PROPOSED PACIFIC INDUSTRIAL PARK

Location:

LOT 5315 & 5313-7, DEDEDO, GUAM

Owner:

DON SADHWANI

DESIGN OF DRAINAGE SYSTEM

-	T .	~ • .	•
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1.	Design	UHC	ııa.

1.a Rainfall Frequency Spectrum

1.b Exceedance Frequency

1.c Recharge Criteria (Rev)

1.c.1 Site Location

1.c.2 Hydrologic Soil Group

1.c.3 Percolation Rate (Actual)

1.d Water Quality Criteria (WQv)

1.d.1 Land Use Classification

1.d.2 Designation

1.e BMP

1.e.1 Design

1.e.2 Soils (infiltration rate, fc)

1.e.3 Water Table

1.e.4 Infiltration facility

(At least 100 ft away from supply well)

1.e.5 Drainage Area

1.e.6 Setback

1.e.7 Site slope

10-Year Frequency Storm, i=10"

(Table 2.5, Vol I, Ch. 2 pp 2-17)

20% (Non-Hotspot land use)

Limestone Dominated Region

1.5" Precipitation

Group C, silty sandy limestone and Group D,

clayey sandy silt

0.812 in./min (48.72 in/hr)

Non-Hotspot Land use (Table 2.1, Vol I Ch 2)

S2 (Moderate)

80% Rainfall Event Rule Applies

I-2 Infiltration Basin

fc > 0.5 inch/hr

> 3 feet separation

No water supply wells nearby

> 5 Acres

Basin edge > 25-ft from all structures

No more than 6%; not fill soils



2. References:

- 2.a CNMI /Guam Stormwater Management Manual, October 2006 Prepared by Horsley Witten Group, Inc.
- 2.b USDA NCRS Urban Hydrology for Small Watershed

3. Attachments

3.a Fig. 2.1 CNMI/Guam SW Mgt Manual

Recharge Augmentation Zones and Water

Quality Criteria Designation for Guam

3.b Percolation Test Report

Prepared by Geo-engineering & Testing

dated January 12, 2014

4. Design of Infiltration Basin

4.a Tributary Areas Grass Area

Acre 18.410

Paved Area
Total

19.350 **37.760**

Impervious Area, %

$$\frac{19.35}{37.76} = 0.512$$

4.b Compute Water Quality Volume, **WQv**, Using the Unified Stormwater Sizing Criteria

$$= \underbrace{P \times A \times I}_{12} \qquad \text{Where:}$$

P = 0.8 (inches)

A = Site Area (Acres) 37.76

I = Impervious area (dec.), 0.512

$$= 0.8 x$$

1.2889

37.76

acre-feet

0.512

12

Compute Recharge Volume, Rev

Rev

4.c

 $= F \times A \times I$ Where:

F = 1.5 (inches)

A = Site Area (Acres) 37.76

I = Impervious area, 0.512

.76

0.512

12

acre-feet

>

1.2889

Use greater volume for WQv

Check minimum WQv (or 0.2 watershed inches) with computed WQv

$$WQvmin = 0.0167 x 37.760 = 0.6306 < 2.4166 Use WQv = 2.4166 WQv = 2.4166 acre-feet = 105,267 ft3$$

4.d Calculate the required surface area (both equations 1 and 2 should be equal)

Eq. 1 Ab
$$= \underbrace{(2Vw-At^*db)}_{(db-P+fcT)}$$
 Where: Ab
$$= \text{surface area at the bottom of basin (ft2)}$$

$$= \text{design volume (ft3), 105,267}$$
 At
$$= \text{area at the top of basin (ft2)}$$

$$= \text{L (length) x W (width)}$$

$$= \text{design rainfall depth (in), 10}$$

$$= \text{fc}$$

$$= \text{infiltration rate (in/hr), 48.72}$$

$$= \text{time to fill basin (hr)}$$

$$= \text{(assume 2 hours)}$$

$$= \text{side slope, z: 1, 1}$$

Eq. 2 Ab =
$$(L-(2*z*db))(W-(2*z*db))$$

Solving value of Ab by Trial and Error

Trial No. 1

$$\begin{array}{rcl}
 \text{db} & = & 6 & \text{ft} \\
 L & = & 140 & \text{ft} \\
 W & = & 65 & \text{ft} \\
 z & = & 1
 \end{array}$$

Page 3 of 4

Ab2=
$$140 - 2 \times 1 \times 6 \times 5$$

= 128×53.00 = 6784×5
Ab1 Ab2 N.G.

Trial No. 3

$$db = 6.25$$
 ft

 $L = 140$ ft

 $W = 65$ ft

 $z = 1$

Ab1

Ab2

N.G.

Trial No. 4

$$db = 6.50$$
 ft

 $L = 140$ ft

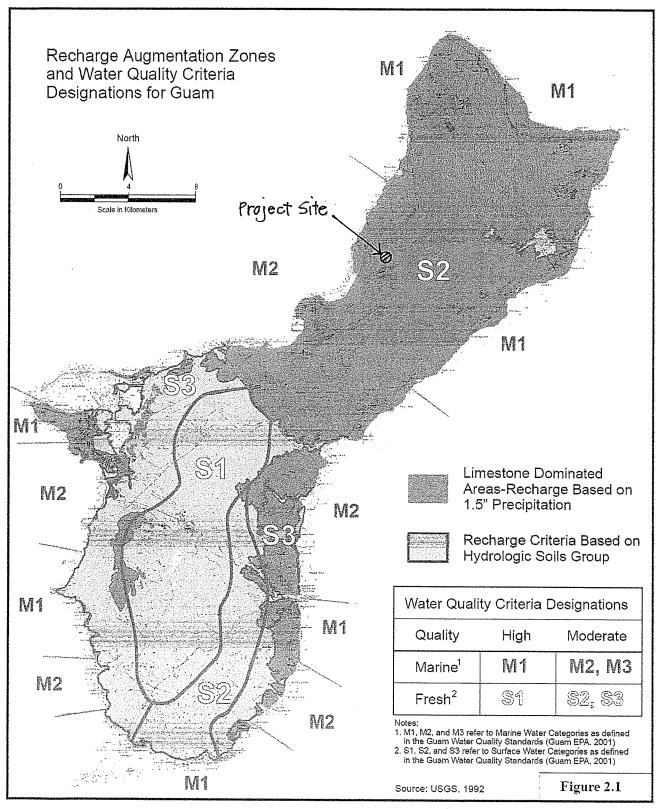
 $W = 68.408$ ft

 $z = 1$

Final Basin will be **7.5** ft deep which provides 1 ft of freeboard Dimension of Infiltration basin shall be as follows:

4.e Design Pretreatment

Storm run-off will be designed to be conveyed thru the the asphalt paved concrete curb into catch basins and pipe towards the infiltration basin.



Project: PACIFIC INDUSTRIAL PARK Route 3, NCS, Dededo



GEO-ENGINEERING & TESTING, INC.

Geotechnical & Material Testing Engineers P.O Box 8170, Tamuning, Guam 96931 Telephone: 671-646-5500 Facsimile: 671-646-6600

January 12, 2015 920.S

Deepak Sadhwani 788 South Marine Corps Drive, Suite 2A Tamuning, Guam 96913

Attention: Mr. Sadhwani

Dear Mr. Sadhwani:

Report - Percolation Test Proposed Pacific Industrial Park Lot 5315, Dededo, Guam

We performed one percolation test at the proposed Pacific Industrial Park, Lot 5315, Dededo, Guam. The approximate location of the percolation test is shown on the attached Percolation Test Location Plan. The percolation test hole was manually excavated to approximately 14 inches in diameter and 3 deep feet below the existing ground surface.

The percolation test hole exposed approximately 8 inches thick of medium dense, reddish brown-white silty sandy limestone gravel, overlying moderately hard to hard, light brown-white coralline limestone. No free water was encountered in the percolation test hole.

The percolation test hole was first saturated with water prior to conducting the percolation test. The following percolation test results were obtained:

Percolation Test	Overall Rate,	Last Rate,	Recommended
No.	inches/minute	inches/minute	Rate, inches/minute
1	1.624	0.813	0.812

(Note: Percolation rate may vary from point to point)

Respectfully submitted,

GEO-ENGINEERING & TESTING, INC.

Ukrit Siriprusanan Civil Engineer – 360

Attachment: Percolation Test Location

